

U. S. Department of the Interior
Bureau of Land Management

National Wild Horse & Burro Advisory Board Meeting Minutes

Courtyard by Marriott – Sacramento Cal Expo
1782 Tribute Road
Sacramento, CA 95815

April 14 – 15, 2014



U.S. Department of the Interior
Bureau of Land Management

Contents

Executive Summary	4
Monday, April 14, 2014.....	6
Welcome & Introductions	6
Call to Order	6
Agenda Review	7
BLM Overview	7
BLM's New Director	7
Sage Grouse Update.....	7
National Academy of Sciences Report Update	7
Welcome & Introduction to California	7
California Wild Horse and Burro Program	8
Approval of September 9 – 11, 2013 Minutes	10
Advisory Board Charter/SOPs	10
BLM Response to Advisory Board Recommendations	11
Responses to Board's Recommendations on the National Academy of Sciences Findings	11
Responses to the Board's Recommendation on Other Program Areas	15
U. S. Forest Service Update	17
Wild Horse and Burro Program Update.....	17
Notebook Tab Review	17
Human Resource Update	18
Guidance Update.....	18
Palomino Valley Corrals Shade Shelter Study.....	18
Upcoming Solicitations.....	19
Western Rangeland Horse Populations	19
Action Taken to Incorporate NAS Findings	21
NAS Chapter Review.....	22
Wild Horse and Burro Research Update.....	25
2011 SpayVac Pasture Trial.....	25
2014 SpayVac Trial	26
Request for Applications.....	26
NAS Related Research and Projects	27
Public Comment Period	27
Tuesday, April 15, 2014.....	28
Population Surveys	28

Why the USGS is Involved	28
National Academy Report Guidelines	29
FY2014 Surveys: What is the process now?	29
Upcoming USGS Survey-Related Research	30
Update on Shelter from Weather Extremes	31
Thermal Comfort Assessments	31
US Davis Shelter Research	32
Adoption Initiatives	34
BLM Led Adoptions	34
Mustang Heritage Foundation Partnership.....	35
Platero Project Partnership.....	38
Inmate Training Program	40
Advisory Board Recommendations to the BLM.....	41
Next Advisory Board Meeting.....	43
Closing Remarks	43
Meeting Adjournment.....	43
Acronyms	44

Executive Summary

The Wild Horse and Burro Advisory Board (Board) advises the Secretary of the Interior, the Bureau of Land Management (BLM) Director, the Secretary of Agriculture, and the Chief of the U. S. Forest Service on matters pertaining to the management and protection of wild, free-roaming horses and burros on the Nation's public lands.

During its April 14 – 15, 2014, meeting held in Sacramento, California, the Board received updates from the BLM on a number of different areas pertaining to the management of wild horses and burros including BLM California's wild horse and burro program which contains BLM's third largest wild horse and burro population, two large wild horse and burro facilities, and aggressive adoption and training/gentling programs involving many partners and volunteers such as the Sacramento County Sheriff's Department, several military branches, and the Back Country Horsemen.

The Advisory Board's Charter approved by the Secretary of the Interior on July 22, 2012, will expire on July 21, 2014. The Board may suggest changes to a new Charter but the ultimate decision on the Charter's contents is the Secretary's.

The United States Forest Service (USFS) continues to progress on important restoration issues on lands containing wild horses and burros including completion of various National Environmental Policy Act analyses to determine appropriate actions to meet the USFS's responsibilities.

From a policy standpoint, BLM will be finalizing its interim policy addressing sale of wild horses. Other policies will address euthanasia as an act of mercy, removal of animals during the foaling season, and the Comprehensive Animal Welfare Program.

An overview of BLM's efforts to address findings and recommendations identified in the National Academy of Science's (NAS's) *Using Science to Improve the BLM Wild Horse and Burro Program: A Way Forward* report was provided. In addition, an update of BLM's research program was provided addressing (1) two SpayVac and one Porcine Zona Pellucida research projects, (2) work being completed in cooperation with the U. S. Geological Survey (USGS) to address several NAS findings and recommendations, and (3) a Request for Applications requesting research proposals designed to address developing or refining techniques and protocols for the contraception or spaying/neutering of animals.

Paul Griffin from the USGS provided an overview of a three-year interagency agreement between BLM and the USGS for technical assistance in identifying appropriate survey methods for BLM Herd Management Areas, training BLM staff in the implementation of those methods, exploring other methods for population surveys, and developing a population survey data base.

Dr. Al Kane from the Animal and Plant Health Inspection Service provided an overview of a thermal profile assessment to be conducted at the BLM Palomino Valley Corrals in Reno, Nevada. The objectives of the assessment will be to (1) evaluate the summertime thermal profiles of light, medium, and dark colored wild horses and burros and (2) examine the potential effects of shade for these animals to determine if shade is needed to reduce heat loads during midday and how shade may help animals maintain a normal thermal profile.

Dr. Kathryn Holcomb from the University of California, Davis, School of Veterinary Medicine provided an overview of equine response to hot weather conditions and the results of her shade research. The conclusions reached in the study were (1) horses do benefit from shade and (2) if shade is available, horses will use it; however, use of shade may depend on herd dynamics and the socialization between animals.

Kali Sublett from the Mustang Heritage Foundation (MHF) provided an overview of their primary programs including the Extreme Mustang Makeover, Trainer Incentive Program, three youth programs, Mustang Million, and the Mustang Mentors for Veterans. Since its inception in 2007, the MHF has adopted 4,862 animals which Ms. Sublett projected a cost savings to BLM of \$214,667,024.

Heidi Hopkins from The Humane Society of the United States provided an overview of the Platero Project which includes a privately funded 5-year grant for \$760,000 to be spent on education, adoption, and fertility control research for wild burros. The Platero Project is strongly focused on training or gentling of wild burros for adoption, enhancing the burro sales program, connecting burro adopters with professional trainers, and supporting adoption events.

Tm Bryant, Ranch Manager for the Nevada Department of Corrections; Alan Shepherd, BLM Nevada's Wild Horse and Burro Program Leader; and Martha Gagne, Special Assistant to BLM's Wild Horse and Burro Division in Washington, D.C., gave an overview of the BLM's national inmate training initiative and Nevada's inmate training program in Carson City, Nevada. BLM currently has inmate training programs in six states and is looking to expand the program to other States. Since the beginning of the Nevada program, over 200 inmates have trained 852 animals for adoption. Benefits of the inmate training program to the inmate include instilling structure and confidence, teaching an industry skill, making the inmate more prepared for re-entry into society, and lowering the recidivism rate.

On the second day of the meeting, the Advisory Board identified 18 recommendations:

- Eleven recommendations addressed changes to membership of three BLM-formed and eight Advisory Board-formed working groups;
- One recommendation addressed shortening the title of the *Director's Challenge-type Efforts that Support Volunteer Resources* Advisory Board-formed working group to *Support Volunteer Resources*;
- One recommendation eliminated the *National Wild Horse and Burro Advisory Board Standard Operating Procedures* Advisory Board-formed working group;
- One recommendation asked BLM to conduct environmental analyses which highlight the consequences and the resulting cumulative impacts of leaving horse numbers over AML on the affected rangelands. The NEPA analysis should also emphasize the impact on rangeland health of keeping numbers above AML levels;
- One recommendation asked BLM to consider establishing a simplified format/process available on the website to allow BLM to give quick response to offers of volunteerism, service, and resources;
- One recommendation asked BLM to continue its financial support for partnership agreements that aid the adoption of trained horses and burros and decrease the burden of long-term holding;
- One recommendation asked BLM to explore options to increase continuity of Board membership, and,
- One recommendation asked BLM to have a budget report as a standing agenda item for all Advisory Board meetings.

Monday, April 14, 2014

Welcome & Introductions

Call to Order

Dr. Boyd Spratling, Chair of the Bureau of Land Management's (BLM's) National Wild Horse and Burro Advisory Board (Board), opened the meeting at 8:07 AM at the Courtyard by Marriott – Sacramento Cal-Expo in Sacramento, California by asking each Board member to introduce themselves.

Board Member	Representing
Timothy Harvey	Humane Advocacy
Rick E. Danvir	Wildlife Management
John Falen	Livestock Grazing
Callie M. Hendrickson	Public Interest
Dr. Boyd Spratling	Veterinary Medicine
June Sewing	Wild Horse & Burro Advocacy
Dr. Robert E. Cope	Natural Resource Management
Fred T. Woehl, Jr.	Public Interest
Dr. Sue M. McDonnell	Wild Horse & Burro Research

Three new Board members, Dr. Sue McDonnell, Dr. Robert Cope, and Fred Woehl, were asked to provide information concerning their background and experience.

Dr. Sue M. McDonnell representing Wild Horse and Burro Research was raised on a dairy farm in northeastern Pennsylvania and is currently a Clinical Associate and Adjunct Professor of Reproduction and Behavior at the University of Pennsylvania School of Veterinary Medicine. Dr. McDonnell holds a Ph.D. from the University of Delaware and is a certified applied animal behaviorist.

Dr. Robert E. Cope representing Natural Resource Management has lived in Salmon, Idaho since 1977. He earned his Doctorate of Veterinary Medicine at Kansas State University and has practiced veterinary medicine since 1975. In addition, he has served as a Lemhi County (Idaho) Commissioner for the past 13½ years. He enjoys being involved with public affairs and looks forward to serving on the Advisory Board.

Fred T. Woehl, Jr. representing Public Interest is from Harrison, Arkansas, and has been involved with horses for over 40 years as a trainer, natural horsemanship clinician, and educator. He is actively involved with the Equine Science Department at the University of Arkansas and taught Equine Science at North Arkansas College. He has served as a volunteer for the BLM's Wild Horse and Burro Program for 10 years, conducting demonstrations of wild horse versatility and assisting with adoptions.

In addition to the Board members, Greg Shoop, BLM's Deputy Assistant Director for Resources and Planning and the Designated Federal Official for the meeting, and Dean Bolstad, Wild Horse and Burro Senior Advisor in BLM's Washington Office, introduced themselves. Mr. Bolstad represented Joan Guilfoyle, BLM's Wild Horse and Burro Division Chief, who participated in the meeting via the phone and online streaming capabilities.

Dr. Spratling introduced Barry Imler from the United States Forest Service (USFS), Paul Griffin from the U. S. Geological Survey (USGS), Dr. Al Kane from the Animal and Plant Health Inspection Service (APHIS), Alan Shepherd from BLM's Nevada State Office, Jim Kenna and Tom Pogacnik from BLM's California State Office, and Debbie Collins and Jason Lutterman from BLM's Washington Office.

Agenda Review

BLM employee Kathie Libby, serving as the meeting's facilitator, introduced herself and welcomed the new Board members as well as those attending the meeting in person and those participating via online streaming technology. She reviewed the rules of the meeting including the importance of being respectful of others to ensure work can be accomplished, voices can be heard, and respect can be paid. Ms. Libby completed a review of the agenda for the two-day meeting.

Dr. Spratling recognized the dedication and commitment given by the three outgoing Advisory Board members – Dr. Robert Bray (Wild Horse and Burro Research), Julie Gleason (Public Interest & Advisory Board Co-Chair), and James Stephenson (Natural Resource Management).

BLM Overview

In his opening remarks, Greg Shoop expressed his personal appreciation for being able to meet each Board member and to hear their deliberations over the next two days. Mr. Shoop stated that BLM employees work for the agency because they believe in multiple use management, but it is a difficult challenge. He finds it remarkable that individuals such as the Advisory Board members willingly volunteer to engage in a complex program such as the wild horse and burro program.

BLM's New Director

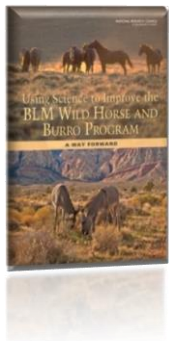
Mr. Shoop indicated that the United States Senate confirmed Neil Kornze as BLM's Director on April 8, 2014.

Sage Grouse Update

The public review and comment period for the series of draft Environmental Impact Statements (EISs) addressing the effects of implementing proposed Greater Sage-Grouse conservation measures on the lands administered by the BLM and the USFS has closed. The agencies are reviewing input received during the comment period to prepare the proposed plans and final EISs, which are anticipated to be completed in the late summer or early fall.



National Academy of Sciences Report Update



In September 2013, the Advisory Board spent considerable time addressing the National Academy of Sciences (NAS) report titled *Using Science to Improve the BLM Wild Horse and Burro Program: A Way Forward*. Since September 2013, BLM has been very active and engaged in implementing several NAS recommendations which will be addressed later in the presentations.

From a budget standpoint, the wild horse and burro program received a fiscal year (FY) 2014 budget of \$77 million, which will allow for continuation of critical program operations and address several NAS recommendations. For FY2015, the President's Budget request is \$80 million, which includes an increase to address additional NAS recommendations.

Welcome & Introduction to California

Mr. Shoop introduced BLM's California State Director, Jim Kenna, who has held several key positions including BLM's Arizona State Director, BLM's Oregon Associate State Director, Deputy Assistant Director for Natural Resources and Planning in BLM's Washington Office, Field Manager in BLM's Palm Springs Field Office in southern California, and a Budget Analyst for the Department of the Interior.

State Director Kenna welcomed the Board to California which ranges from the redwood forests in the north to one of the driest deserts in the world in the south, and includes a scenic coast. Mr. Kenna believes BLM's roots lie in three National Wild Horse and Burro Advisory Board Meeting – April 14 – 15, 2014

fundamentals: sustainability, heritage (BLM's long-term relationship with the American people and how resources are passed from generation to generation), and community. In addition to the three fundamental roots, Mr. Kenna believes BLM employees should hold three critical values: service, integrity of BLM's processes, and the willingness to be held accountable for the agency's actions and decisions.

Mr. Kenna expressed his appreciation for the Board's service in addressing the difficult and complex issues of the wild horse and burro program. BLM is at an important point in time where the agency will be taking action to establish a firm, sustainable footing that provides for the heritage of the wild horse and burro program and respects the values of the people involved in the program.

California Wild Horse and Burro Program



Tom Pogacnik

Tom Pogacnik, BLM's California Deputy State Director for Natural Resources, provided an overview of his 28-year career with the agency that has been heavily involved with the wild horse and burro program and various positions at BLM's field, State, and Washington levels.

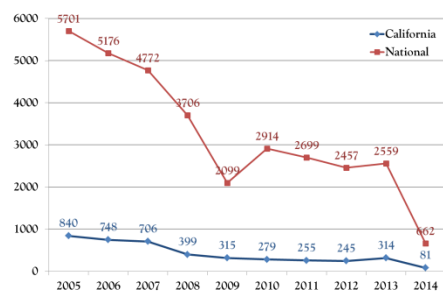
BLM California's wild horse and burro program is unique as compared to other BLM states. California contains the third largest wild horse and burro population in the lower 48 contiguous states. The majority of wild horses are located in the northeastern part of the state while the majority of burros are located in the southern and southeastern portion of the state.

A critical part of California's wild horse and burro program is adoptions. As a state, over the years, California has adopted more wild horses and burro than any other BLM state, which prior to the economic recession involved 800 to 1,200 horses per year. Complementing the adoption program, BLM California has a very active and dynamic public involvement program that includes volunteers.

BLM California's current estimated wild horse population of 3,324 animals is approximately 200 percent of the State's identified Appropriate Management Level (AML) of 1,746 animals. The wild horse population census information was recently conducted following the established USGS protocols and was coordinated with BLM Nevada and Oregon. The current estimated wild burro population of 989 animals is also approximately 200 percent of AML (476 animals.) The census information for the wild burro population in the southern part of the state is more speculative due to the burro's tendency to distribute widely and the lack of surveys. One of the most significant challenges of BLM California's program involves gathering wild horses and burros which have strayed onto private land and land owners requesting the animal be removed.

BLM California has two wild horse and burro facilities – one in Litchfield, California and the second in Ridgecrest, California. Both facilities have a 1,000 animal holding capacity and are currently holding 1,344 animals (jointly.) In addition, there is a small facility in the Los Angeles basin known as the Redlands facility which has a capacity of 20 animals and is currently holding 12 animals.

The state is working closely with the Sacramento County Sheriff's Department to open the Rio Cosumnes Correctional Center where wild horses will be trained and held. The facility is currently being constructed and is anticipated to be operational in 2015.



Over the past several years, the wild horse and burro adoption trend nationally and in California has declined. In FY2005, 840 animals were adopted in California with the adoption numbers steadily declining to a low of 245 in FY2013 (inset to left). There have been a number of reasons for the decline including the economic recession and increasing costs for hay and veterinary care. General social changes

where fewer people are raised in an agricultural environment are also playing into the decline of adoption figures. To offset these factors, BLM is working to improve its wild horse and burro educational programs and increasing the number of trained or gentled animals available for adoption.

Many BLM California adoptions are conducted in partnership with different organizations and numerous volunteers including the U. S. Border Patrol, U. S. Marine Corp, and the Back Country Horsemen. BLM California has a strong presence in many school systems and at community events such as the Napa Mustang Days, Back Country Horsemen's Rendezvous – Norco, the Norco Extreme Mustang Trail Challenge, UC Davis Horse Days, and the Nevada County Fair.

The volunteer aspect of BLM California's wild horse and burro program is one of the program's highlights. At one time, approximately 400 volunteers addressed many different aspects of the program including promotional activities, animal compliance inspections, providing assistance in finding services for adopters, and other program-related activities. Unfortunately, with the decline in adoptions, there has been a corresponding decline in volunteers.

School visits have been very successful in involving youth in public land activities. BLM has a partnership with Grant High School in Sacramento where BLM takes animals to the school to educate students on public land management and natural resources. Similarly, community events have been extremely successful in educating the public about BLM's wild horse and burro program and providing interaction between BLM and the public.

Compliance inspections are typically conducted at least twice during an animal's adoption period. The first inspection occurs immediately after the animal is adopted to ensure facilities are appropriate and to discuss BLM's expectations with the adopter(s). Other inspections are typically completed during the middle of the adoption period and/or just prior to titling the animal.

There continues to be a need to foster orphaned animals particularly in the southern part of the state where burros typically locate near highways during periods of warm days and cold nights. Burros stay on roads at night for warmth. Volunteers typically provide the necessary foster care to orphaned animals until they can be adopted. It is difficult to express the value of volunteers who have provided nearly 2,200 hours to BLM California's wild horse and burro program at an estimated cost savings of \$42,000. More importantly, volunteers provide the "eyes and ears" for BLM's program and outstanding community outreach and care for the animals

Following his presentation, Mr. Pogacnik responded to questions from the Board.

In response to a question from Fred Woehl addressing funding for construction of the correctional training facilities, Mr. Pogacnik indicated that BLM does not provide funding for the construction of wild horse training facilities. BLM does provide an "animal per day" cost that is comparable to holding an animal in one of BLM's holding facilities. June Sewing indicated the National Mustang Association has provided a significant contribution to the construction of the Rio Cosumnes Correctional Center. In addition, BLM has been approached by the Los Angeles Sheriff's Department concerning the possibility of initiating a similar program.

John Falen encouraged those who have not attended a Mustang Makeover event to attend such an event. It is amazing what the trainers can accomplish with a wild horse in 100 days.

Tim Harvey applauded the efforts made to enlist the support of volunteers in the wild horse and burro program. Mr. Harvey noted that the demographics indicate horse owners are typically older Americans who are less likely to adopt or ride a green, unbroken animal. He believes the training and gentling programs are critical to providing animals that are marketable to those who can afford to adopt a wild horse or burro. In a follow up question, Mr. Harvey asked if there was

Upcoming California Events

*May 3, 2014
CSHA
San Jose, CA*

*May 16 – 17, 2014
Extreme Mustang Makeover
Norco, CA*

*September 3 – 6, 2014
Visions of the Wild
Vallejo, CA*

*September 2014
Kern County Fair*

a standard BLM protocol requiring a timely response to a request to donate time, money, and/or effort. Mr. Pogacnik responded that BLM California does have a statewide process to ensure consistency which is coordinated through the State Office in Sacramento. When a BLM employee is approached by a member of the public, their name is forwarded to the Wild Horse and Burro Program Coordinator in Sacramento who, in turn, contacts the person to discuss their request in more detail.

Callie Hendrickson asked if the number of animals used by the U. S. Border Patrol and other federal agencies were included in the reported adoption figures. Mr. Pogacnik indicated that the agencies adopt the animals which are included in the reported adoption figures. In a follow up question, Ms. Hendrickson asked if during its educational events the BLM provides a significant focus on helping the general public understand the requirements of maintaining healthy animals on the rangelands. Mr. Pogacnik responded that during events such as the Trainer Incentive Program (TIP), trainers and other volunteers are educated by BLM in terms of rangeland management issues but typically do not address rangeland management issues such as forage allocation with the general public. Ms. Hendrickson indicated that it is important the public understands rangeland health and asked BLM California to consider including a discussion of rangeland health when meeting with potential adopters and the general public.

Approval of September 9 – 11, 2013 Minutes

The preliminary final minutes from the September 9 – 11, 2013 Board meeting were approved without modification.

Advisory Board Charter/SOPs



Dean Bolstad

Dean Bolstad, Senior Advisor on the BLM's Washington Office Wild Horse and Burro staff provided a brief explanation of two documents – (1) Advisory Board's Charter and (2) By-Laws and Standard Operating Procedures (SOPs) – which provide guidance and direction to the Advisory Board.

The Board's current Charter was approved by the Department of the Interior on July 22, 2012, and will expire on July 21, 2014. If the Board would like to identify possible changes to the Charter, they should be presented to BLM in the near future. BLM has identified a limited number of changes which will be recommended to the Secretary of the Interior.

The Board's *By-Laws and Standard Operating Procedures* allow more flexibility and input from the Board in outlining how the Board will operate.

When asked by Dr. Spratling if BLM had identified any potential changes to the Charter, Mr. Bolstad responded that the Charter does not include a stipulation identifying if a quorum is needed for the Board to convene or if a simple majority is sufficient. In a follow up question, Dr. Spratling asked if the stipulation should be part of the Charter to which Mr. Bolstad agreed. Callie Hendrickson agreed that it is important to identify when decisions can be made and thought the By-laws would be the appropriate document to address that level of detail. Mr. Bolstad corrected his earlier statement that the need for a quorum should be addressed in the Charter. It would be more appropriately addressed in the By-laws, not the Charter.

Callie Hendrickson asked if the estimated annual operating cost of \$128,500 was an accurate projection of the Board's costs over the past several years. Mr. Bolstad indicated that a budget code is used to document all costs associated with the operation of the Advisory Board. **ACTION:** Ms. Hendrickson requested the Board's budget information (annual operating costs) be presented to the Board.

In a follow up question, Ms. Hendrickson asked if the original intent was to have the Advisory Board serve on a continual basis. Mr. Bolstad explained that in 1990, Director Cy Jamison convened an Advisory Board to address development of a strategic plan for the wild horse and burro program, which was completed and the Board disbanded. In the recent past, the Board has been serving on a continual basis to assist BLM in addressing the continual challenges faced by the program. Ms. Hendrickson suggested the Board continue this discussion tomorrow as she has become frustrated concerning her perception that the input provided by the Board over a period of several years doesn't seem to result in any action or improvement in the program.

Board member Dr. Robert Cope asked if the National Federal Advisory Committee Act (FACA) requirement for a termination clause results in a conflict between Items 10 and 11 as identified in the Board's Charter. Mr. Bolstad indicated that the FACA requirement does appear to create a conflict as suggested by Mr. Cope. In a follow up question, Mr. Cope indicated that he has never seen a statement as outlined in Section 4 of the Charter that didn't allow the agency to expand the role of the committee. He suggested the Board should consider adding a factor between items e and f allowing the Board to address other issues that may arise.

BLM Response to Advisory Board Recommendations



Joan Guilfoyle

Joan Guilfoyle, Chief of BLM's Wild Horse and Burro Program, expressed her appreciation for being able to participate in the meeting via the phone and welcomed the three new Board members. Ms. Guilfoyle also expressed her appreciation for the efforts and commitment of the three outgoing Board members and indicated the terms of three additional Board members – Dr. Boyd Spratling (Veterinary Medicine), Callie Hendrickson (Public Interest), and June Sewing (Wild Horse and Burro Advocacy) – will expire in FY2015.

Ms. Guilfoyle provided a verbal summary of BLM's response to sixteen Advisory Board recommendations associated with the National Academy of Science's findings identified in the *Using Science to Improve the BLM Wild Horse and Burro Program: A Way Forward* report and six recommendations made by the Board on other issues during its September 2013 meeting (BLM's written response to the recommendations was provided to the Board as part of the meeting materials).

Responses to Board's Recommendations on the National Academy of Sciences Findings

NAS FINDING #1: Management of free-ranging horses and burros is not based on rigorous population-monitoring procedures.

NAS FINDING #2: On the basis of the information provided to the committee, the statistics on the national population size cannot be considered scientifically rigorous.

Advisory Board Recommendation # 1: The Board recommends that BLM accept these NAS findings.

BLM Response: BLM accepted the recommendation. Ms. Guilfoyle highlighted that in FY2014, funding was received to address many NAS findings. The President's FY2015 budget proposal identifies approximately \$3 million specifically to address the NAS findings. More specific information concerning the NAS findings will be presented later in the meeting and were not addressed in this presentation.

Advisory Board Recommendation # 2: The Board recommends that the survey data at the HMA level and procedures used to modify the survey data to generate population estimates be made readily available to the public to improve transparency and public trust in the management program.

BLM Response: BLM accepted the recommendation and is expanding their population estimation to include a description of the survey method(s) used, the confidence limit of the population estimate, and if the survey method was modified in any fashion.

Advisory Board Recommendation #3: The Board recommends development of protocols for how frequently surveys are to be conducted and ensure that the resources are available to field personnel to maintain a standardized survey schedule. Consideration should be given to identifying sentinel populations in a subset of HMAs that represent the diverse ecological settings throughout western rangelands.

BLM Response: BLM accepts the recommendation and has secured the financial resources necessary to implement the recommendation. In addition, BLM has entered into an agreement with USGS to assist field offices in determining the appropriate survey method(s) for each HMA. Existing BLM policies are being revised and training is being provided to field office staff.

NAS FINDING #3: Horse populations are growing at 15-20 percent a year.

Advisory Board Recommendation #4: The Board acknowledges that wild horse and burro populations are increasing and recommends that BLM continue with procedures to deal with the excess annual increase in population.

BLM Response: BLM agrees with the recommendation but limited financial resources and holding space concerns have necessitated the need for removal criteria addressing private property concerns, public health and safety issues, and court orders to prioritize removal efforts.

NAS FINDING #4: Management practices are facilitating high horse population growth rates.

Advisory Board Recommendation #5: The Board applauds BLM for holding wild horse and burro population numbers below the carrying capacity which helps maintain rangeland health and healthy animals.

BLM Response: BLM remains committed to achieving AML.

NAS FINDING #5: The primary way that equid populations self-limit is through increased competition for forage at higher densities, which results in smaller quantities of forage available per animal, poorer body condition, and decreased natality and survival.

Advisory Board Recommendation #6: The Board agrees that self-limitation of population increase is not an option due to the high probability of damage to rangelands and acknowledges the rangelands' inability to sustain wild horses and burros, wildlife, and other multiple uses.

BLM Response: BLM concurred with the Board's recommendation.

NAS FINDING #6: Predation will not typically control population growth rates of free-ranging horses.

Recommendation #7: The Board agrees with this finding.

BLM Response: BLM agrees with the Board's recommendation.

NAS FINDING #7: The most promising fertility-control methods for application to free-ranging horses or burros are porcine zona pellucida (PZP) vaccines, GonaCon™ vaccine, and chemical vasectomy.

Advisory Board Recommendation #8: The Board recommends that no options for reproductive control be eliminated from consideration due to the conflicting data on immuno-contraceptives such as IUDs, ovariectomy, and tubal ligation.

BLM Response: BLM concurs with the Board's recommendation and would like to have access to all fertility-control methods that address population growth suppression. BLM issued a related Request for Information (RFI) in September 2013 and a Request for Application (RFA) in March 2014, which will be addressed later in the meeting.

Advisory Board Recommendation #9: The Board recommends that BLM institute field implementation of immuno-contraceptives in HMAs at a scale large enough to determine success of the procedure prior to full implementation on the range.

BLM Response: BLM concurs with the Board's recommendation.

NAS FINDING #8: Management of equids as a metapopulation is necessary for the long-term genetic health of horses and burros at the HMA or HMA-complex level.

Advisory Board Recommendation #10: The Board agrees with the finding and emphasizes that it could be used to introduce non-reproducing components of a population.

BLM Response: BLM concurs with the Board's recommendation.

NSA FINDING #9: Phenotypic data have not been recorded and integrated into genetic management of free-ranging populations. Recording the occurrence of diseases and clinical signs and the ages and sexes of the affected animals would allow BLM to monitor the distribution and prevalence of genetic conditions that have direct effects on population health.

The Board did not comment on this finding.

NAS FINDING #10: Input parameters used in the WinEquus model are not transparent, and it is unclear whether or how results are used in management decisions.

Advisory Board Recommendation #11: The Board recommends that BLM continue to use the WinEquus model but ensure that input data is specific to each HMA rather than using model defaults, which would result in greater transparency for the public.

BLM Response: BLM agrees with the recommendation and will increase transparency by disclosing the parameters used in the WinEquus model and how the model is used to make management decisions.

Advisory Board Recommendation #12: The Board recommends that BLM provide more training for specialists in the use of the WinEquus model.

BLM Response: BLM concurs with the recommendation and has provided training on the WinEquus model to resource specialists.

NAS FINDING #11: A more comprehensive model or suite of models could help BLM to address and adapt to challenges related to management of horses and burros on the range, management of animals in holding facilities, and program costs.

Advisory Board Recommendation #13: The Board recommends that BLM continue to use the WinEquus model for its value in the short-term. For the long-term, explore more comprehensive models including the Landscape Ecosystem Model and other technologies.

BLM Response: BLM concurs with the recommendation and will implement the recommendation dependent on receiving appropriate financial resources.

NAS FINDING #12: The *Wild Horses and Burros Management Handbook* lacks the specificity necessary to guide managers adequately in establishing and adjusting appropriate management levels.

Advisory Board Recommendation #14: The Board recommends that BLM revise the *Wild Horses and Burros Management Handbook* to include:

- Specific guidelines for developing and adjusting AMLs to support planning;
- Recognition of the need for flexibility at the local level; and,
- Clear definitions of ecological balance and other items cited in the NAS report to ensure consistency with those used in other BLM programs, other Federal agencies, and organizations such as the Society for Range Management.

BLM Response: BLM agrees the handbook needs to be revised and is working with BLM field staff to make the appropriate modifications.

NAS FINDING #13: The Handbook does not clarify the vague legal definitions related to implementing and assessing management strategies for free-ranging equids.

The Board felt their response to this finding was addressed in Recommendation 14.

BLM Response: BLM will address this finding as it revises the *Wild Horses and Burros Management Handbook*.

NSA FINDING #14: How AMLs are established, monitored, and adjusted is not transparent to stakeholders, supported by scientific information, or amenable to adaptation with new information and environmental and social change.

The Board felt this finding was addressed earlier.

NAS FINDING #15: Resolving conflicts with polarized values and opinions regarding land management rests on the principles of transparency and community-based public participation and engagement in decision-making. Decisions of scientific content will have greater support if they are reached through collaborative, broadly based, integrated, and iterative analytic-deliberative processes that involve both the agency and the public.

Advisory Board Recommendation #15: The Board recommends that BLM's Wild Horse and Burro officials work with stakeholders to develop forums for open, honest discourse and transparency which can help build trust.

BLM Response: BLM believes the transparency of its process is high and the effect on the public's trust essentially remains unchanged. BLM is committed to doing everything within its means to increase the transparency of BLM's processes. BLM is considering funding additional socio-economic research based on the NAS input.

NAS FINDING #16: Tools already exist for BLM to use in addressing challenges faced by its Wild Horse and Burro Program.

The Board agreed to allow this finding to stand as written.

BLM Response: BLM agreed with the Advisory Board to leave the finding as written.

Ms. Guilfoyle responded to questions from the Board concerning BLM's response to the Board's recommendations on the NAS findings.

Robert Cope expressed confusion relating to NAS Finding 4 and Advisory Board Recommendation 5 which don't readily appear to be coordinated. Ms. Guilfoyle indicated that BLM's approach to a sustainable future was to remove animals from the rangeland and either find good homes for the animals through the adoption program or maintain the animals in a long-term facility. NAS Finding #4 states that removal of animals from the rangeland may not have the residual effect of limiting the number of foals born on the rangeland. Dr. Spratling indicated that he believes something may have been lost in the interpretation of Advisory Board Recommendation #5, which may have to be addressed when the Board considers recommendations to the BLM later in the meeting. Rick Danvir indicated that if a large wild horse population were left on the rangeland, the animals' body condition would eventually decline resulting in a reduction of the number of foals born on the rangeland. By removing animals from the rangeland as BLM has done for many years, the remaining animals would maintain a better body condition resulting in a larger number of foals. He believed the Advisory Board made its recommendation to encourage BLM to continue its removal practices to maintain smaller populations which is better for the environment and rangeland health.

Responses to the Board's Recommendation on Other Program Areas

Advisory Board Recommendation #16: The Board recommends that Dr. Robert Bray replace Paul Durbin on the "Herd Area Re-Population" Board-formed working group.

BLM Response: BLM accepted the recommendation; however, Dr. Bray is no longer on the Board; therefore, a replacement will need to be addressed by the Board later in the meeting.

Advisory Board Recommendation #17: If BLM is unable to remove excess wild horses where rangelands are being damaged and wild horses are being compromised, the Board recommends that BLM determine if the current Sage Grouse Environmental Impact Statements (EISs) adequately evaluate the consequences of leaving wild horses on the range. If the Sage Grouse EISs do not adequately address the issues of leaving wild horses on the range, the Board also recommends that BLM complete an EIS addressing the issues associated with not removing excess animals from the range with special consideration given to areas where HMAs overlap with priority sage-grouse habitat.

BLM Response: BLM will continue to work internally with those individuals preparing the Sage Grouse environmental documents to ensure the impacts of wild horse and burro activities on sage grouse habitat are being evaluated.

Advisory Board Recommendation #18: The Board recommends that John Falen and Rick Danvir replace Gary Zakotnik and Paul Durbin on the Board-formed Resources working group. Other members of the working group include Dr. Boyd Spratling, Jim Stephenson, and Callie Hendrickson.

BLM Response: BLM accepted the Board's recommendation.

Advisory Board Recommendation #19: The Board recommends that BLM allow time on the agenda for the next Board meeting for members of the Board-formed 'Public Comment' working group (Tim Harvey, June Sewing, and Julie Gleason) to provide an overview of public commentary.

BLM Response: The agenda for each meeting is developed by BLM with input from the Advisory Board. The agenda for this meeting provides opportunity for the 'Public Comment' working group to report on their efforts.

Advisory Board Recommendation #20: The Board recommends that BLM allow time at future Board meetings for an informal 'round table' session to allow for interaction between the Board and members of the public.

BLM Response: BLM is responsible for coordinating the meeting agenda with the Advisory Board Chair. The Board may have an informal roundtable after the conclusion of the formal meeting; however, BLM employees will not be required to attend the informal roundtable session.

Advisory Board Recommendation # 21: The Board recommends that BLM establish a consistent time table for Board meetings, e.g., first three weeks of April and the first three weeks of October.

BLM Response: BLM accepts the Board's recommendation. The FY2014 meetings have been scheduled for April and August 2014. Specific dates for the August 2014 meeting will be forthcoming.

The Board agreed to postpone questions associated with BLM's response to Recommendations 16 through 21 until later in the meeting. Tim Harvey asked if the two Statements of Concern raised by the Board during its September 2013 meeting were going to be addressed. Ms. Guilfoyle responded that the Statements of Concern were not formal recommendations presented by the Board; therefore, were not addressed in the information presented under Tab 4 of the Board's notebook. Ms. Guilfoyle suggested the Board consider including Statements of Concern with the Board's formal recommendations to ensure they are addressed. The Board agreed to have Ms. Guilfoyle address the two Statements of Concern, which are provided below.

Statement of Concern 1: The Board would appreciate and request more timely responses from BLM to their requests.

Ms. Guilfoyle could not recall the specific discussion associated with this concern but indicated that she committed to provide BLM's response to the Board's formal recommendations within 30 days of the meeting. BLM's response to the Board's September 2013 recommendations was sent on November 12, 2013. Tim Harvey indicated that the concern wasn't associated with the timeliness of responding to formal recommendations but to the timeliness of responding to requests for information from individual Board members or working groups outside of Board meetings. Dr. Spratling interjected that the Board was looking for an update between meetings addressing the progress being made to implement recommendations made by the Board. **ACTION:** Ms. Guilfoyle indicated that BLM would begin providing periodic updates or progress reports addressing actions being taken to implement Board recommendations. Ms. Guilfoyle added that Sarah Bohl has been hired to serve as BLM's liaison with the Advisory Board.

Statement of Concern 2: The Board requests that BLM develop a system for recording Board recommendations and monitoring progress in implementing those recommendations.

Ms. Guilfoyle asked if it was the intent of the Board to address all recommendations made in the past or begin tracking recommendations from the September 2013 meeting and future meetings. Mr. Harvey indicated that he would like to include all recommendations including those made in past meetings. Mr. Harvey reiterated the frustration expressed by Callie Hendrickson earlier in the meeting associated with the apparent lack of progress being made to implement Board recommendations. **ACTION:** Ms. Guilfoyle indicated that development of a recommendation tracking system would be possible particularly with Sarah Bohl coming onboard. Ms. Guilfoyle also emphasized that BLM will do everything possible to implement the Board's recommendations, it is important to recognize that the agency's ability to implement some recommendations may be limited, take substantial time, or not be possible.

U. S. Forest Service Update



Barry Imler

Barry Imler, Rangeland Program Manager for the USFS, thanked the Board for their time and commitment in addressing the important issues facing the wild horse and burro program. In his position, Mr. Imler is responsible for developing and implementing national policy. The USFS continues to progress on important restoration issues on lands containing wild horses and burros which involve completion of various National Environmental Policy Act (NEPA) analyses to determine what actions are necessary to meet the USFS's obligations. Following completion of the NEPA process, implementation of the necessary restoration actions will begin. The USFS is also

responding to requests for removal of wild horses and burros from private and Tribal lands.

Wild Horse and Burro Program Update

Joan Guilfoyle expressed her appreciation for Jim Kenna and Tom Pogacnik for their presentations addressing California's wild horse and burro program. She also addressed her approach of conducting Advisory Board meetings in different locations around the country to facilitate stakeholder involvement and provide opportunities for BLM State program updates. The August 2014 Advisory Board meeting is tentatively scheduled to be held in Cheyenne, Wyoming. To minimize costs, many BLM employees participate via the phone.

Notebook Tab Review

Ms. Guilfoyle reviewed the content of the Board's notebook (inset to right). Highlights addressed in the review included:

- Tab 5 – BLM is finalizing its response to the NAS report; therefore, there is not a document under this tab.
- Tab 8 – With the recent change in three Advisory Board members, there is a need to address the membership of several working groups.
- Tab 10 – Includes a press release addressing BLM's Request for Applications associated with population growth suppression methods.
- Tab 12 includes several miscellaneous reports which are important in setting the foundation for the "On Range" discussion that will occur later in the meeting. The reports include (1) the Adobe Town/Salt Wells daily gather report which was conducted in December 2013 in southwestern Wyoming as a result of a court order, (2) holding

Advisory Board Tab Summary

Tab	Tab Description
1.....	Agenda
2.....	September 2013 Minutes
3.....	WH&B Charter/SOPs
4.....	BLM Responses to September 2013 Recommendations
5.....	Responses to NAS Report
6.....	Power Point Presentations
7.....	WH&B Inmate Training Initiative
8.....	Working Groups
9.....	Guidance
10.....	BLM New Releases & Federal Register Notice
11.....	U. S. Forest Service Report
12.....	Miscellaneous Reports
13.....	Maps
14.....	Public Comments

facility report as of March 31, 2014, (3) FY2014 and FY2015 budget information, (4) FY2013 expenditures, (5) adoption and sales update as of April 5, 2014, (6) litigation update, and (7) Research Advisory Team update.

Human Resource Update

Sarah Bohl has been hired as the program's Outreach Coordinator and will serve as the Advisory Board's liaison. Jason Lutterman is working with the Division under the Presidential Management Fellowship program for six months as a Management and Program Analyst. Martha Gagne is on detail from the White House and is working on several initiatives including expansion of the inmate training program. Lili Thomas who worked in the National Program office in Reno, Nevada, retired in January 2014. Sally Spencer, who is the Division's Supervisory Marketing Specialist, is on detail. The BLM will be offering the Research Coordinator position to an individual in the near future and will be filling the Palomino Valley Corrals manager position, which recently became vacant.

The Division received approval for reorganization of the program, which allows for streamlining and addressing issues in a more logical fashion. The Reno program office will become the "On Range" Branch responsible for operation of corrals, research, population growth suppression management actions, and population surveys. The "Off Range" Branch will be based in Oklahoma and will be responsible for the national information center, long-term holding contracts, short-term corral contracts, ecosanctuaries, and inmate training program coordination. The Washington Office will remain responsible for the program's national budget and policy, national adoption coordination, the Advisory Board, and national partnerships.

Guidance Update

BLM's short-term guidance is issued in Instruction Memorandums (IMs) which typically expire two years from the date of issuance. The Washington Office issued interim guidance for the sales program approximately one year ago, which strengthened the language applying to the sale of eligible wild horses to ensure the intent of the buyer was to provide a good home for the animal. BLM will be finalizing that policy in the near future.

Other policy documents anticipated to be released in the near future include (1) an updated "euthanasia as an act of mercy" policy, (2) removal of animals during the foaling season, (3) accounting for animals in facilities that are too young to freeze brand or are still-born, and (4) the Comprehensive Animal Welfare Program (CAWP). In FY2013, the Washington Office finalized several pieces of guidance under the CAWP. In FY2014, additional guidance will be released addressing comprehensive animal welfare in short-term corrals including SOPs for animal care, BLM employee and contractor training and certification processes, and developing a process for evaluating the effectiveness of the policy.

Palomino Valley Corrals Shade Shelter Study

In 2013, concern was expressed about the extremely high temperatures at the Palomino Valley Corrals (PVC) facility. In response to those concerns, BLM enlisted the assistance of the University of California at Davis in an evaluation of the situation and received several recommendations, which included:

- 50 percent of the area within treatment pens for sick animals should be covered by a shade structure;
- Healthy mature animals that receive adequate feed and water and have a body condition of three or more do not require shade structures.

Trial shade structures were constructed in the fall 2013; however, the extreme heat conditions subsided prior to conclusion of the study. The study will continue through the summer of 2014.

Similarly, concern was expressed that wind structures may be needed during the winter at the short-term holding facility in Rock Springs, Wyoming. To address these concerns, BLM has approached animal welfare researchers to ensure management decisions made are based on science and not personal opinion or strictly emotion.

Following her presentation, Ms. Guilfoyle addressed questions from the Board. Tim Harvey indicated that he didn't believe it necessary to engage an academic expert to address these conditions but merely instill some common sense. He couldn't understand why BLM couldn't have constructed wind screen structures as there was donated funding available to cover all costs. Based on his lifelong experience with horses, he believes animals will seek relief from adverse conditions such as wind and high temperatures if given the chance. Ms. Guilfoyle responded that many people have ideas or suggestions to address an issue, which often are in conflict with other ideas and suggestions. Therefore, BLM has elected to engage individuals who have studied the issues and animal behavior to address such concerns. Ms. Guilfoyle stressed that climate change is a factor requiring a national approach with a consistent policy based on science; not personal observation.

Mr. Harvey suggested the need for a short-term policy addressing how donations could be effectively and efficiency addressed. Mr. Harvey indicated that BLM requires specific shelter specifications for adopted animals but does not require similar specifications for animals at its own facilities. Ms. Guilfoyle indicated the concern raised by Mr. Harvey is one reason why BLM elected to address comprehensive animal welfare in short-term corrals as the next piece of guidance under the CAWP.

Callie Hendrickson expressed appreciation for BLM's willingness to work with people who have studied the issues. Ms. Hendrickson indicated that she knows people who are willing to adopt an animal but have not done so due to the strict structure requirements imposed by the BLM.

Upcoming Solicitations

BLM will be issuing a helicopter contract solicitation in the near future that will include the SOPs required under the CAWP. In addition, BLM will be issuing solicitations for short-term corral and long-term pasture facilities in April and May, 2014.

Ms. Guilfoyle highlighted that the best level of BLM's organization to address volunteer requests is at either the field or State office. BLM's Washington Office is exploring the possibility of a foundation or an account where donations can be managed. Deputy Assistant Director Shoop indicated that a proposal to establish a BLM foundation is part of the President's FY2015 budget proposal.

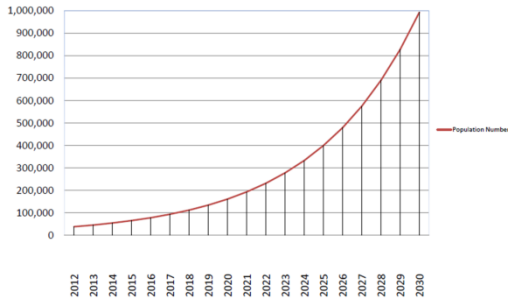
Western Rangeland Horse Populations

Ms. Guilfoyle displayed four maps that, when consolidated, depict the lands containing an estimated 150,000 to 200,000 wild horses and burros that (1) are and are not protected by the *Wild Free-Roaming Horses and Burro Act of 1971* and (2) are administered by BLM, Bureau of Indian Affairs (BIA), USFS, U. S. Fish and Wildlife Service (USF&WS), National Park Service (NPS), and the Department of Defense (DOD). Regardless of land ownership, these animals are in the same situation – populations doubling every four years, and no significant natural predators. Similar to BLM, other land managers or land owners do not have effective avenues of controlling population growth nor do they have the capacity to remove excess animals and place them in short- and long-term holding facilities. Management of wild horses and burro is truly a landscape-wide issue which needs to be considered when trying to maintain healthy animals on healthy rangelands.

During the period of FY2000 through FY2013, the number of animals on the rangeland decreased from a high in FY2000 of 48,624 to a low in FY2007 of 28,563 after which they started to increase to an estimated 40,605 animals in FY2013. During the same time period, the number of animals in off-range facilities steadily increased from a low in FY2000 of 6,086 animals to a high in FY2013 of approximately 49,088 animals.

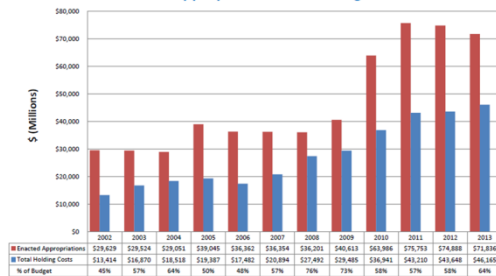
Population Growth with No Management Actions

- Reflects 15 – 20% annual increase, confirmed by the June 2013 NAB report
- Does not reflect self-limitation (on-range die-offs)



As depicted in the inset to the left, the population of wild horses and burros on BLM-administered lands will exponentially increase if no management action is taken.

Enacted Appropriations vs. Holding Costs



The percentage of BLM's wild horse and burro program appropriations devoted to caring for the "off range" population has ranged from a low of 45 percent in FY2002 to a high of 76 percent in FY2008 as depicted in the inset to the left. On average, in FY2012, the cost of holding an animal for three years prior to it being adopted was \$9,055, which includes \$812 for gather and removal, \$5,431 for holding the animal, \$2,612 for adoption, and \$200 for miscellaneous costs.¹ Conversely, the cost of maintaining an animal that is not adopted and placed in a BLM facility is approximately \$46,252, which includes \$45,260 for holding the animal, \$992 for gather and removal, and \$812 for miscellaneous costs.

Over the past 10 years, adoptions have declined to approximately 2,000 animals per year. During that same period, an annual average of 8,300 animals have been placed in holding facilities. Currently, there are more than 49,000 animals in BLM holding facilities.

BLM's senior leadership has been actively engaged in discussions relating to FY2014 removal decisions. The wild horse and burro program is a national program that must be addressed from a corporate perspective. All factors must be carefully considered, all options weighed, and appropriate priorities identified. Criteria established for identifying FY2014 gathers include:

- Court ordered removals;
- Private land owner requests
- Public safety and health; and
- Escalating rangeland issues (declining forage and water; wildfire, etc.)

BLM's Washington Office has been and will continue working closely with the BLM State Offices. Everyone understands that the decisions will be made from a corporate perspective.

During the discussion, the Board expressed surprise at the \$46,252 figure for maintaining an animal over a 25-year period. Some Board members understood that figure to be closer to \$15,000. Dean Bolstad clarified the difference in the figure presented today (\$46,252) and the approximate \$15,000 figure presented in the past. In the past, an assumption was made that an animal would spend one or two years in a short-term holding facility (\$4 to \$5 per day) before being placed in a long-term pasture (\$1.35 - \$1.45 per day). During the last two long-term holding solicitations, very little space has been acquired. Due to the limited space available in long-term holding, the \$46,252 figure makes an assumption that the animal will be held in short-term holding for the entire period of time and remainder of its life if not adopted. Tim Harvey suggested the information should encourage efforts to locate and secure additional long-term holding pastures. Mr.

¹ Compliance inspections, preparation, and holding.

Harvey suggested the need for a type of triage system where wild horses are evaluated shortly after being removed to identify animals that have a high probability of being adopted. Those animals determined to have a lower probability for adoption should be quickly transported to a long-term facility. Ms. Guilfoyle indicated that many ranches in the mid-west are being sold and new owners are less receptive to long-term pasture contracts. John Falen appreciated receiving the figures which he believes are more realistic than previously presented figures. Based on these figures, he also believes the program is not sustainable and drastic changes will be necessary. Mr. Harvey indicated that he believes the focus should be placed on developing appropriate on-range management and policy where the horses on the range don't cost BLM critical funding. Callie Hendrickson indicated that she also appreciated receiving the figures but believes it important to determine a cost estimate of the damage to the rangeland if no action is taken.

Action Taken to Incorporate NAS Findings

Ms. Guilfoyle provided an overview of how BLM is incorporating the findings and recommendations identified in NAS's *Using Science to Improve the BLM Wild Horse and Burro Program: A Way Forward* report. Ms. Guilfoyle reminded the Board that the NAS report did not address several aspects of the wild horse and burro program such as off range activities and the Comprehensive Animal Welfare Program. The Study addressed eleven key scientific challenges and questions (inset to right.)

Implementation of the action plan addressing the NAS recommendations is a critical component of BLM's efforts to achieving the program's long-term vision of sustaining healthy wild horse and burro populations on healthy public land in a manner that supports recreation and other multiple uses. To achieve this vision, BLM will focus its efforts in several key areas:

- Finding more effective growth suppression models (NAS Report Chapter 4);
- Accurately estimating population levels (NAS Report Chapter 1);
- Monitoring genetic diversity (NAS Report Chapter 5);
- Researching public demand for adoption and public knowledge and nonmarket values (NAS Report Chapter 8);
- Innovating to connect off-range animals with good homes;
- Establishing more eco-sanctuaries; and,
- Using existing management tools as effectively as possible.

In support of the priorities identified above, BLM has been taking actions to develop a sustainable program such as using more robust population survey methods; issuing the Request for Applications to identify new and innovative techniques for population growth suppression; continuing support and funding for research for longer lasting fertility control contraceptives; establishing the Wyoming eco-sanctuary and additional eco-sanctuaries; issuing internal national policies that strengthens the humane treatment of animals, increasing public transparency at gather operations, increasing internal communication capacities; providing public tour opportunities at long-range pasture facilities; continuing active engagement with the Advisory Board, supporting eleven Board- and BLM-formed working groups; increasing engagement with stakeholder organizations and individuals that represent the diversity of opinion and perspectives on the program; exploring a variety of new partnership to increase the number of trained wild horses and burros for adoption or sale into good homes, developing the Comprehensive Animal Welfare Program, issuing guidance limiting the number of animals that can be purchased, and initiating research of appropriate shade requirements at short-term holding facilities.

Key Scientific Challenges & Questions

1. *Estimates of the wild horse and burro populations*
2. *Population modeling*
3. *Genetic Diversity in the wild horse and burro herds*
4. *Annual rates of wild horse and burro population growth*
5. *Predator impact on wild horse and burro population growth*
6. *Population control*
7. *Immunocontraception of wild horse mares (porcine zona pellucida)*
8. *Managing a portion of a population as non-reproducing*
9. *AML establishment or adjustment*
10. *Societal considerations*
11. *Additional research needs*

NAS Chapter Review

Ms. Guilfoyle provided an overview of actions being taken by BLM to address the NAS findings.

NAS Report Chapter 2 – Estimated Population Size and Growth Rates

NAS FINDING #1: Management of free-ranging horses and burros is not based on rigorous population-monitoring procedures.

NAS FINDING #2: On the basis of the information provided to the committee, the statistics on the national population size cannot be considered scientifically rigorous.

NAS FINDING #3: Horse populations are growing at 15-20 percent a year.

To address NAS Findings 1, 2, and 3, BLM acquired the services of USGS to provide technical support in planning, designing, and implementing the appropriate population survey method(s) for BLM's 179 Herd Management Areas (HMAs.) In FY2014, appropriate survey method(s) will be identified for approximately one-third of BLM's HMAs. In addition, BLM is developing a database to record and track population survey-related information and initiating research recommended by NAS addressing distance sampling and a potential Mark Resight method involving genetic markers in fecal matter.

As BLM transitions from its historical population survey methods to using the USGS scientifically based methods, Callie Hendrickson encourages BLM to differentiate on population census reports available to the public, HMAs using historical methods versus those using the scientifically based methods. Ms. Guilfoyle indicated that when the population census figures are released annually, the difference in survey methods will be addressed in press releases as well as on BLM's web site.

NAS Chapter 3 – Population Processes

NAS FINDING #4: Management practices are facilitating high horse population growth rates.

NAS FINDING #5: The primary way that equid populations self-limit is through increased competition for forage at higher densities, which results in smaller quantities of forage available per animal, poorer body condition, and decreased natality and survival.

NAS FINDING #6: Predation will not typically control population growth rates of free-ranging horses.

To address NAS Findings 4, 5, and 6, BLM is developing a mathematical model that will address a full spectrum of ecological factors to determine those that most significantly affect wild horse and burro population and health. Wild horses significantly impact the forage and water resources as well as increasing competition with other grazing ungulates. The mathematical model will provide the necessary science to support management decisions; rather than relying on conjecture or personal opinion.

Dr. Robert Cope asked if BLM would analyze the effects on other species when forage is reduced to a level that adversely affects equine health and reproduction. Ms. Guilfoyle indicated the study design has not been developed but would like

the study to address the effects on other species. **ACTION:** She agreed to take Dr. Cope's suggestion forward for discussion with the USGS.

NAS Chapter 4 – Methods and Effects of Fertility Management

NAS FINDING #7: The most promising fertility-control methods for application to free-ranging horses or burros are porcine zona pellucida (PZP) vaccines, GonaCon™ vaccine, and chemical vasectomy.

To implement NAS Finding #7, BLM released a Request for Information (RFI) in March 2013, for other available population growth suppression techniques. Sixteen responses were received from the RFI. BLM released a Request for Applications (RFA) in March 2014 with responses to be submitted by May 7, 2014. Responses to the RFA will undergo a peer review process conducted by the NAS with implementation of on-the-ground research projects as soon as possible. BLM is also working with USGS to develop an improved method for marking animals (e.g. ways to identify animals on the range that had been treated with fertility-control) which would not impact the animal's behavior. BLM will continue its ongoing effort to expand the use of short-term fertility vaccines including PZP. BLM's Washington Office is working to develop new policy and guidance addressing fertility control application and initiating field trials of long-lasting population growth suppression agents, and completing appropriate NEPA analysis on the new fertility control tools.

NAS Chapter 5 – Genetic Diversity in Populations

NAS FINDING #8: Management of equids as a metapopulation is necessary for the long-term genetic health of horses and burros at the HMA or HMA-complex level.

NSA FINDING #9: Phenotypic data have not been recorded and integrated into genetic management of free-ranging populations. Recording the occurrence of diseases and clinical signs and the ages and sexes of the affected animals would allow BLM to monitor the distribution and prevalence of genetic conditions that have direct effects on population health.

To address these findings, BLM continues to (1) monitor genetic diversity in HMAs and HMA complexes, (2) consult with experts in genetic and equine veterinary medicine to determine if there are genetic disorders in HMAs or HMA complexes, and (3) increase the genetic monitoring in wild burro populations. Efforts yet to be initiated include conducting more in-depth analysis of herds containing a strong association with the Spanish mustang heritage and reviewing existing policy that supports the NAS recommendation concerning management of HMAs as a metapopulation.

Fred Woehl inquired as to how the genetic diversity was monitored. Ms. Guilfoyle indicated that genetic diversity is typically determined from hair samples collected during gather operations. In a follow-up question, Mr. Woehl asked if genetic diversity is monitored in HMAs where there haven't been recent gathers. Dean Bolstad indicated that BLM has sampled genetic diversity for at least ten years, which has established a baseline of genetic information for most HMAs. Mr. Bolstad indicated that, in a general sense, the genetic monitoring data collected to date has not identified any issues.

Tim Harvey referred to the NAS report that addressed four specific herds with unique genetic markers. He asked if BLM was placing an emphasis on monitoring the genetic diversity within those four herds. Ms. Guilfoyle indicated that BLM intends to conduct more in-depth analysis of the herds containing a strong association with the Spanish mustang heritage but have not initiated that analysis at this point. Dean Bolstad indicated that BLM will be developing policy focusing on those special herds as well as initiating a research study addressing the collection of genetic diversity information without having to gather the animals. Note: During the second day of the Board meeting, Mr. Bolstad followed up on Mr. Harvey's question indicating the NAS Committee recognized that genetic management in some HMAs is complicated by other considerations. The report indicated that "BLM will need to balance concerns about maintaining breed ancestry

with the need to maintain genetic diversity.” Therefore, there was recognition by the NAS that some smaller herds with special genetics may not need to be managed as part of a meta-population.

Dr. Spratling indicated that the Board did not comment on the NAS finding because the study was asking for phenotypic data which is the genetic expression, which is not gathered by BLM. Dr. Spratling suggested that we were overlooking that the NAS study was requesting the collection of phenotypic expression characteristics. Dean Bolstad indicated that the color of removed animals is recorded but other phenotypic expressions are not. Dr. Al Kane, a Senior Staff Veterinarian with the APHIS and an advisor to BLM’s wild horse and burro program, indicated that BLM’s response was summarized to address all genetic areas where NAS made observations. Part of the NAS recommendation to monitor phenotypes was geared toward using coat color as an indicator of possible genetic defects associated with serious health problems. This is often difficult to do as the linkage to coat colors is often difficult to identify in practice. Therefore, BLM’s response was that they will begin to consult with experts to determine where phenotypic expressions may be used to monitor for genetic defects. Dr. Cope asked if there was sufficient visible difference in confirmation to make them indicative of inbreeding or lack of genetic diversity. Dr. Kane responded that there are multiple factors that cause most conformational problems making it difficult to identify a clear genetic link. Dr. Spratling confirmed that NAS was asking for monitoring of phenotypic expression of genetic defects.

NAS Chapter 6 – Population Models and Evaluation

NAS FINDING #10: Input parameters used in the WinEquis model are not transparent, and it is unclear whether or how results are used in management decisions.

NAS FINDING #11: A more comprehensive model or suite of models could help BLM to address and adapt to challenges related to management of horses and burros on the range, management of animals in holding facilities, and program costs.

An ongoing action to address these NAS findings includes the completion of a WinEquis simulation and identification of the input parameter values being used. BLM will analyze and update place-specific data for inclusion into the model. BLM is also exploring the use of the WinEquis model for burros and the need to develop additional guidance relating to the use of the WinEquis model.

Fred Woehl asked to have the WinEquis model explained. Dean Bolstad indicated the WinEquis model was developed in the early 2000s to help predict the effects of removals on the wild horse population growth and the use of PZP.

NAS Chapter 7 – Establishing and Adjusting AMLs

NAS FINDING #12: The *Wild Horses and Burros Management Handbook* lacks the specificity necessary to guide managers adequately in establishing and adjusting appropriate management levels.

NAS FINDING #13: The Handbook does not clarify the vague legal definitions related to implementing and assessing management strategies for free-ranging equids.

NSA FINDING #14: How AMLs are established, monitored, and adjusted is not transparent to stakeholders, supported by scientific information, or amenable to adaptation with new information and environmental and social change.

Ongoing actions that address these NAS findings include:

- A project in the Jackson Mountains HMA in Nevada;
- A USGS study to address the potential for horse grazing behavior to influence (either directly or indirectly) the establishment carrying capacities.

Other actions being considered internally include defining ecological health in the context of AML, determining if BLM's monitoring strategies should be modified to be more effective, determining how Geographic Information System (GIS) should be used, and determining the influence of wild horse use on wildfire recovery.

Tim Harvey suggested that a higher priority should be given to developing a standard approach for determining AML based on the NAS questioning the scientific basis for BLM's approach, the amount of variation found in setting AML across the field offices, and the importance of AML as one of the primary tools for managing horses. Ms. Guilfoyle indicated that addressing AML needs to be a higher priority. After the September 2013 Board meeting, members of the wild horse and burro staff met with members of the other BLM programs, which was the first time they directly engaged other programs to discuss how the different programs could work together to meet BLM's multiple use mission.

Dr. Cope asked if AML was established in conjunction with the NEPA process. Ms. Guilfoyle indicated that AMLs are established as part of BLM's land use planning process, which does include a NEPA analysis. Dr. Cope indicated that the Healthy Forests Restoration Act requires agencies to evaluate the effects of not performing an action and asked if there was anything similar in wild horse program that requires an analysis of not reducing herd size. Dean Bolstad indicated that the focus has been on the methods and procedures used to determine the number of grazing animals that should be on the rangeland and which animal is causing the impacts on the land. Environmental assessments that evaluate wild horse and burro removals do contain the analysis of a "no action" alternative. BLM's Assessment, Inventory, and Monitoring method for monitoring vegetation will play a key role in assessing land health and the effects of grazing animals.

NAS Chapter 8 – Social Considerations in Managing Free-Ranging Wild Horses and Burros

NAS FINDING #15: Resolving conflicts with polarized values and opinions regarding land management rests on the principles of transparency and community-based public participation and engagement in decision-making. Decisions of scientific content will have greater support if they are reached through collaborative, broadly based, integrated, and iterative analytic-deliberative processes that involve both the agency and the public.

BLM has dedicated funding for several surveys including (1) the knowledge and values people have for wild horses and burros, (2) the adoption and sale demand for wild horses and burros, and (3) the analytic and deliberative process of engaging the public.

Dr. Spratling indicated that he fully supports the collaborative and public input process but suggested the "scientific aspect" of the finding should be removed. He doesn't believe a scientific conclusion can be reached if a collaborative process is used. Mr. Harvey believes there is value of having input from people with on-the-ground experience and that input could, in some aspects, be as valuable as scientific information. Chair Spratling agreed with Mr. Harvey and indicated he (Dr. Spratling) was concerned with how the finding was written. Mr. Woehl indicated that to get something accomplished, everyone will need to give some to arrive at an acceptable solution. Dr. Cope provided an example in northern Idaho where a collaborative group has been working to address forest management issues. One key in that effort was to get everyone on the ground to understand the issues and, at some point, science cannot be debated.

Wild Horse and Burro Research Update

Dean Bolstad and Dr. Al Kane provided an overview of current and future research studies.

2011 SpayVac Pasture Trial

In 2011, a pasture-trial SpayVac project was initiated in Paul's Valley, Oklahoma. The research project studied the contraceptive effects of two SpayVac formations – aqueous and non-aqueous. In the study, blood testing, physical palpation, and ultrasound were used to determine pregnancy and to evaluate uterine condition. In the first year,

contraceptive results from both formulations were favorable, which is similar to results from a previous study conducted in the late 1990s in Carson City, Nevada. In the 2011 study, no problems with uterine edema were detected.

The aqueous-based formulation results were favorable in Years 2 and 3; however, the pregnancy rate (approximately one-half that of the study's control) was higher than expected. It was noted that 16 of 17 mares which were not pregnant in Year 2 were also open (not pregnant) after exposure to stallions in Year 3.

The results from the non-aqueous formulation were unfavorable in Year 2 and the formulation was dropped from the further study.

2014 SpayVac Trial

The Year 2 and 3 results from the 2011 SpayVac Pasture Trial generated interest from BLM in pursuing further SpayVac research resulting in the initiation of a new SpayVac study on April 1, 2014, which is being led by the USGS. The new study will address two formulations of SpayVac which have higher doses (400 micrograms) of PZP as compared to the vaccines (200 micrograms) used in the 2011 study in an attempt to get higher efficacy rates.

The study will also compare two different adjuvants – Freund's Complete Adjuvant and Freund's Complete Adjuvant Modified. The 2011 study only used the Freund's Complete Modified adjuvant.

Dr. Cope asked if there was a correlation between the efficacy and the age of the mare. Dr. Kane indicated that the mares involved in the study were restricted to between the ages of 3 and 10 years, which was done to avoid the potential confounding effects of age influencing the results. Dr. Cope indicated that his experience found that if mares between the ages of 15 to 20 are continually bred, they will continue to breed; however, if you missed a year, the mare will stop breeding. Dr. Kane agreed that is commonly thought to be the case among domestic horses and indicated that the purpose of the study was to give the maximum challenge to the vaccine by using prime breeding age mares and avoiding additional potential sources of variation in fertility.

2011 3 – 4 Year PZP Pen Trial

A potential 3 – 4 Year PZP vaccine pen trial was conducted at the prison facility in Carson City, Nevada. Year 1 results from the study of the prospective 3- to 4-year PZP vaccine formulations and PZP 22, which has been used in the field on mares after capture, have been favorable in terms of preventing pregnancy. In Years 2 and 3, none of the formulations were as effective as expected and the decision was made to discontinue the pen trial after the 2014 foaling season. To complete the study, some additional in vitro lab work will continue.

The researchers have been encouraged to submit their ideas related to further research with PZP in response to BLM's Request for Applications.

Request for Applications

In September 2013, BLM issued a Request for Information (RFI) requesting ideas and potential research projects to investigate developing or refining techniques and protocols for the contraception or spaying/neutering of wild horses and burros on the range. Sixteen responses were received addressing chemical and surgical sterilization and chemical contraceptives.

On March 7, 2014, BLM issued a Request for Applications (RFA) requesting research proposals designed to address developing new or refining techniques and protocols for the contraception or spaying/neutering of male and/or female wild horses and burros. The deadline for submitting proposals is May 7, 2014. BLM has obligated \$1.5 million to fund successful proposals. BLM will be working with the National Academy of Sciences to review the proposals and assist BLM in determining the best proposals for funding.

Callie Hendrickson asked if the IUD research proposal discussed at previous Board meetings could be included under the RFA. Mr. Bolstad said yes in answer to the question, and indicated that the previous RFI did provide opportunity to submit mechanical contraceptive methods; however, none were submitted. Tim Harvey indicated that he had talked with several individuals about the possibility of using an IUD in wild horse mares to prevent pregnancy; however, the costs of developing the device outweigh the financial benefits to be gained. Dr. Cope suggested approaching a research entity with an interest in funding such research. Mr. Bolstad indicated that BLM would not exclude any potential method. Ms. Hendrickson indicated that she hopes there will be opportunity for research proposals to be submitted after the May 7th deadline.

NAS Related Research and Projects

BLM is working with the USGS to initiate several studies (listed below) in FY2014 that would address a number of the NAS findings and recommendations. BLM is working to establish a scientific foundation for the future of the wild horse and burro program; however, the agency cannot wait until all research is concluded before moving forward. Good research will provide a multi-pronged approach to resolving BLM's wild horse and burro issues.

- Population Growth Suppression Research (contraception and spay/neuter)
- Burro Survey method
- Sentinel populations studies (demography data)
- Fecal analysis as a method of population survey, and to determine herd genetics, and the spread of invasive species
- Radio marking

Callie Hendrickson asked if the \$1.5 million for research proposals received from the RFA would also have to fund the research projects identified above. Mr. Bolstad indicated that approximately \$3 million had been set aside for the studies identified above. The \$1.5 million for the RFA proposals would not be used to fund the studies identified above.

Dr. McDonnell asked if the contraception studies completed to date provide any insight on the social behavior of the herd by keeping mares from becoming pregnant and the continued estrous cycling in methods that allow cycling. Dr. Kane indicated that there have been a few studies addressing animal behavior and its response to contraception. Most studies indicate some effect on the animal's behavior; however, some of these effects may be similar to those of not having a foal for any reason and there haven't been negative effects on the welfare of the animals from an extended breeding season. Results have shown the welfare of the animal has improved as their body condition and life span increases. Dr. Kane offered that the behavior work has been published and reviewed in some USGS publications and some work done in the Barrier Islands.

Callie Hendrickson asked if BLM was going to fund the entire \$3 million or could USGS cover part of the cost of the research. Mr. Bolstad indicated that the USGS budget allocated for wild horse and burro research could be used would not significantly affect the \$3 million allocated by BLM. Mr. Woehl asked if BLM would accept donations from interested parties to which Mr. Bolstad indicated BLM would accept donations.

Public Comment Period

A public comment period was conducted from 3 PM to 4:40 PM allowing 31 speakers opportunity to address the Board. Each speaker was asked to limit their presentation to three minutes to ensure all speakers have opportunity within the timeframe identified for public comment. Speakers were encouraged to submit their comments in a written format; therefore, no minutes were recorded during this portion of the meeting.

Following conclusion of the public meeting, Chair Spratling asked BLM if there were any clarifying statements they would like to make based on the public comments. BLM indicated that it will utilize the new “From the Public” web site to respond to questions that were asked or facts may have been misrepresented during the public’s comments.

Tuesday, April 15, 2014

In opening the second day of the Wild Horse and Burro Advisory Board meeting, Chairman Boyd Spratling welcomed everyone and asked each Board member to introduce themselves.

Population Surveys

Under the interagency agreement between BLM and USGS referenced in yesterday’s discussion, Paul Griffin from the USGS will provide technical assistance to assist BLM in addressing the population survey challenges facing the wild horse and burro program.

Dr. Griffin understands that wild horses and burros mean many things to many people including attributes that many Americans identify with, such as being strong and resilient, occupying beautiful country, having attributes of our pioneer roots, and being very fertile.

It is fortunate that wild horses and burros are demographically similar to other wildlife species allowing us to learn from conducting aerial surveys of wildlife populations to improve the quality, accuracy, and precision of wild horse and burro surveys. Regardless of a person’s perspective of the wild horse and burro program, the first step for making management decision is to know the number of animals on the rangeland.

Dr. Griffin acknowledged several individuals who have provided help and support as he began his responsibilities in December 2013. In particular, Bea Wade from BLM’s National Program Office in Reno and other individuals in the USGS Wild Horse and Burro research program.

During his presentation, Dr. Griffin addressed five major areas (inset).

Topics to be Addressed

1. *Why the USGS is involved*
2. *National Academy report guidelines*
3. *Two approved methods of aerial survey*
4. *FY2014 Surveys: What is the process now?*
5. *Upcoming USGS survey-related research*

Why the USGS is Involved

The USGS is the research branch for the U. S. Department of the Interior. Within the USGS, there is an Ecosystems Division that includes the Wild Horse and Burro Group which has been conducting wild horse and burro aerial survey methods since 1993. By not being responsible for or part of the decision making processes, USGS brings an impartial perspective to research and has internal as well as external peer-review processes in place.

From a historical perspective, in 2000, Dr. Francis Singer drafted the first Strategic Research Plan for wild horse work. In 2001, PZP field trials began. In 2004, efforts were initiated to explore different methods that would be appropriate for wild horse and burro aerial surveys. With the exception of the 2014 SpayVac study and funding Dr. Griffin’s position, all USGS wild horse and burro research completed to date has been funded by USGS-appropriated funding. Dr. Spratling clarified Dr. Griffin’s statement by asking if the majority of the USGS research (other than SpayVac and Dr. Griffin’s position) would be covered by non-BLM funds. Dean Bolstad indicated that BLM is providing funding to USGS for Dr. Griffin’s population survey expertise and future research projects that BLM will be undertaking with USGS in the future. Mr. Bolstad stated USGS’s budget for wild horse and burro research work is approximately \$200,000. Dr. Griffin indicated that his statement addresses the budget situation as of today.

Under the BLM-USGS interagency agreement, \$450,000² has been allocated for technical assistance with population surveys during the period of FY2013 through FY2016. Under the terms of the agreement, specific tasks to be accomplished include:

- Train BLM in proper survey methods;
- Develop survey training manual and work flow for how surveys are approached;
- Help select a population survey method for each HMA or complex;
- Work with the BLM-contracted statistician;
- Help to develop other new methods for survey; and,
- Help to develop a database for survey data.

A similar agreement is being discussed between USGS and the USFS, which, if approved, will result in the USFS wild horse territories being surveyed with methods similar to those used on BLM's HMAs.

In FY2014, USGS has already provided training to BLM staff in Oregon, Nevada, Utah, and Wyoming, and will be training BLM staff in California, Idaho, and Arizona. In addition, 20 HMAs or Herd Areas (HAs) have been surveyed to date with 66 HMAs or HAs planned for the remainder of the fiscal year.

National Academy Report Guidelines

Key changes recommended by the National Academy of Sciences for the aerial survey program include:

- Use a method that provides a statistically sound estimate of unseen animals
- Manage survey data for repeatable analysis and long-term access
- Survey HMAs completely and if there are animals using areas outside of the HMA, those areas should also be surveyed.
- Survey HMAs as a complex when animals have free movement between adjacent HMAs
- Be consistent as to the time of year when surveys are conducted in an HMA

Dr. Griffin provided an overview of two methods (Simultaneous Double-Count and Photo Mark-Resight) that are used to account for the detection bias and accounting for unseen animals. During his presentation, Dr. Griffin addressed questions from the Advisory Board which are not captured in these minutes.

FY2014 Surveys: What is the process now?

To initiate the population survey process, BLM Field and State Office personnel determine the HMAs to be surveyed during a particular year. They contact the USGS (Dr. Griffin) to assist in planning the aerial surveys. Dr. Griffin trains the BLM employees who will be conducting the aerial survey to ensure the method is consistently conducted. Following the training, the BLM conducts the surveys and, if requested, Dr. Griffin assists in conducting the survey and providing in-flight training, if necessary. Following the survey, BLM employees who conducted the aerial survey enter the data into the system, which are later verified by the same employee a day or two later to ensure accuracy. The data are sent to Dr. Griffin who reviews the data to identify inconsistencies which are clarified. The data are then sent to a statistician who completes the estimation of population size. Once the population estimate is completed, a draft memorandum is sent to the Field Office for review. The population estimate is finalized and the BLM office and Dr. Griffin save the files³ from

² \$263,000 for salary, \$65,000 for travel, and \$122,000 for overhead expenses.

³ Includes the planned flight lines, the actual flight lines, points depicting where animals were seen, scanned copies of paper data, etc.

the analysis. The information is currently stored in the USGS's ScienceBase and eventually at the BLM National Operations Center in Denver, Colorado.

Upcoming USGS Survey-Related Research

Looking to the future of aerial surveys, USGS is looking to address the following areas:

- Test GPS radio collar safety for horses
- Use a 'stratified sampling' method to reduce the area of unoccupied habitat that gets searched thus reducing costs
- Develop new survey techniques for burros
- Use DNA from dung to estimate population size, and potentially evaluate herd genetic structure
- Develop a new method to measure distance from the aircraft to an observed group of animals
- Re-examine Forward-Looking Infrared and the use of drones

John Falen asked what percentage of animals would need to be collared for an accurate count. Dr. Griffin explained that historically approximately 10 to 15 percent of the population would be collared and then counted during subsequent population surveys. Based on work completed with elk in the Pacific Northwest, Dr. Griffin suggested a second approach using radio collars could be taken where a smaller number of radio collars would be placed on animals and during subsequent population surveys the number of groups containing animals with radio collars would be recorded. After completing the visual portion of the population survey, the radio collar detection device is activated and the missed radio collars are found to determine the attributes of the animals (number of animals, vegetation cover they were in, distance from aircraft, etc.) that were not counted during the population survey. After completing several population surveys using this technique, a probability function can be calculated to develop a statistically reliable estimate of the number of animals typically missed during a population inventory. Dr. Griffin indicated that both population survey methods are known to underestimate the number of animals on the rangeland.

In a follow up question, Mr. Falen asked if the animals would be radio collared randomly or if collars would be placed on one type of animal (i.e., mares.) Dr. Griffin indicated that it isn't necessary to randomly collar animals but it is important that collars are distributed widely across the population. Dr. Griffin also indicated that the initial thought is to place radio collars strictly on mares as the neck growth on stallions varies from month to month and excessive fighting between stallions could damage the collar or cause a disadvantage to the animal wearing the collar.

Callie Hendrickson asked if USGS was considering other avenues such as microchips to track animals. Dr. Griffin indicated that radio collars would be the preferred method due to the larger battery size and their ability to transmit the radio signal more effectively. USGS will propose to braid or glue a GPS unit⁴ into the mane or approximately two-thirds down the tail.

June Sewing asked if there has been a comparison of the results of surveys completed in the past with the current estimated population. Dr. Griffin indicated that he hasn't specifically addressed that question but the motivation behind the BLM/USGS interagency agreement is to obtain an accurate measure of the population size over time. The most effective approach would be to complete at least two population surveys using the same method. In a follow up question, Ms. Sewing asked what happens when the collars are no longer useful. Dr. Griffin indicated the collars will drop off of the animal at a specific time period. Dr. Griffin indicated that Dr. Peterson from Brigham Young University in Utah has been using an additional safety device of ensuring the collars drop off the animals by attaching the collar using surgical tubing that will become brittle from long-term exposure to sunlight and break thus releasing the collar.

⁴ GPS units can be very small in size (4 ounces) and can periodically record the location of an animal over several months.

Tim Harvey indicated that collaring mares would be a preferred approach as they have a more consistent presence in a band and are not as likely to engage in fighting as do stallions. He asked if there have been efforts to correlate the long-term movements of bands with the rangeland damage occurring in HMAs. Mr. Harvey believes the proposed research could clarify if wild horses and burros are damaging the rangeland resources or if the damage is occurring by use of other animals. Mr. Harvey indicated that braiding or gluing a GPS unit into the mane or tail would be his preferred avenue over placing a collar on the animal. He also suggested monitoring stallions that are part of a bachelor band. Mr. Harvey indicated that his experience with microchips has found that when placed in the neck of the animal, they have a tendency to break due to fighting, etc. Dr. Griffin indicated that use of radio collars or a GPS unit will be more effective in addressing the question of the resource use by wild horses and burros.

June Sewing asked if Dr. Griffin had access to the data from previous radio collar studies completed in the past. Dr. Griffin indicated that he had not seen such information for wild horses or burros but would be interested in reviewing the information. Dr. Griffin indicated that he would be travelling to Cedar City, Utah in the next ten days and would be willing to meet with Ms. Sewing.

Update on Shelter from Weather Extremes

Thermal Comfort Assessments



Dr. Al Kane

Dr. Albert Kane, Senior Staff Veterinarian for the APHIS/BLM WH&B Partnership, provided an overview of a thermal profile assessment that will be conducted at the Palomino Valley Corrals in Reno, Nevada. The assessment is a collaborative effort of the BLM Wild Horse and Burro program, the APHIS/BLM WH&B Partnership, and the APHIS Center for Animal Welfare. The APHIS Center for Animal Welfare was established in the fall 2010 and serves as a resource for science and technology support of policy development and analysis for animal welfare and a center for technology transfer and science transfer into the regulatory aspects of APHIS work in other areas.

Objectives of the thermal profile assessment are to:

1. Evaluate the summertime thermal profiles of light, medium and dark colored wild horses and burros in a typical BLM holding facility in the western US which includes measuring and evaluating solar radiation being reflected or absorbed by the animals' coat to quantify the effects of solar heat. This involves measuring all heat gained and lost including metabolic, solar, and radiative heat in both full sun and shade.
2. Examine the potential effects of shade for these animals in this environment to determine if shade is needed to reduce heat loads during midday and how shade may help the animals maintain a normal thermal profile or prevent problems associated with overheating.

The assessment methodology is well established and has been used in zoological and game parks to facilitate design of housing and display areas. The evaluation protocol involves (1) measuring the solar absorbance of the animal's hair coat in the sun, (2) measuring the insulating properties of the hair coat, (3) taking measurements⁵ within the thermal zone in the environment at different times of the day and night, and (4) making adjustments to the assessments depending on questions identified during the assessment for possible expansion to include other locations or times of the year.

⁵ Reflective heat off of the ground, other structures, etc.

A final report will be presented to the BLM describing the thermal profiles and potential effects of shade and will include recommendations on the use of shade at BLM facilities. The results of the assessment will be one additional piece of information BLM will have available to provide care for wild horses and burros.

Following his presentation, Dr. Kane addressed questions.

Mr. Rick Danvir asked for a rough estimate of the cost of the assessment. Dr. Kane indicated that the total cost would be approximately \$5,000 per facility visited.

Dr. Boyd Spratling inquired as to the type of equipment used to gather the data. Dr. Kane indicated that short- and long-wave radiation will be measured to estimate the radiation coming from the sun, the absorption properties of the surface receiving the radiation, and the reflective radiation from various objects. Taking the measurements must be done in close proximity to the animal and other objects which may require the use of gentled or domestic animals in the facility for safety purposes.

Mr. Tim Harvey asked where the assessment would be conducted. Dr. Kane indicated the assessment would be conducted at the Palomino Valley Corrals. Mr. Harvey suggested using horses at the Carson City prison facility where the animals have been gentled. Dr. Kane indicated that there are saddle horses at the Palomino Valley Corral that could be used.

US Davis Shelter Research



Dr. Kathryn Holcomb

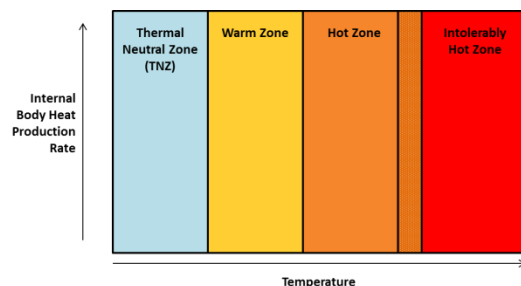
Dr. Kathryn Holcomb from the University of California, Davis School of Veterinary Medicine provided an overview of equine response to hot weather conditions and her shade research.

Horses, like all animals, generate heat through metabolic processes and can either absorb or release heat to the environment. To maintain a normal body temperature, the animal must balance the heat load using four different processes – conduction, convection, radiation, and evaporation. It is important to understand that heat moves from a higher to lower temperature.

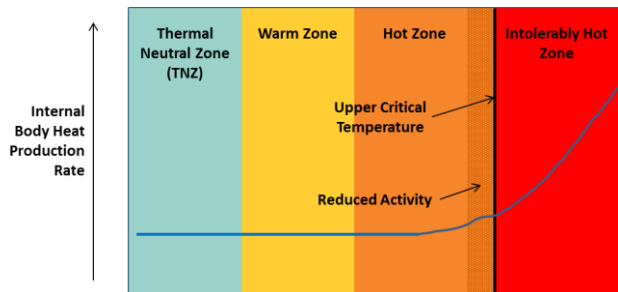
Animal Response to Heat

The animal's response to heat can be categorized in two ways – physiological and behavioral responses. Physiological responses include increased respiration rates, blood flow to the skin, and sweat. Behavioral responses include turning their rump to the sun, move into the shade or breeze, stand rather than lying down, standing near or in water, and drinking more water and eating less feed.

When considering thermal regulation, four temperature zones (inset to right) are important to understand. While in the *Thermal Neutral Zone (TNZ)* the animal only uses the amount of energy needed for basic maintenance; it doesn't expend any extra energy to maintain a normal core body temperature. As the ambient temperature increases, the animal will begin to use energy to maintain normal body temperature. In the *Warm Zone*, the animal will utilize passive responses such as increased water consumption, decreased consumption of feed, and other behavioral responses to maintain a normal body temperature.⁶ As the ambient temperature increases into the *Hot Zone*, the animal will need to use more active physiological responses, which causes an increase in the internal heat production while remaining within the normal body temperature range. As the ambient temperature continues to rise, the *Upper Critical Temperature* will be reached requiring the animal to utilize all thermal regulatory mechanisms (physiological and behavioral) to cool their body temperature. If the ambient temperature passes the *Upper Critical Temperature* and enters



⁶ 99.5 to 101.5°F



the *Intolerably Hot Zone*, without some type of relief to reduce the animal's body temperature, the thermal regulatory mechanisms will be overwhelmed and the animal will lose control of maintaining a normal body temperature. Without external intervention, death of the animal may occur (inset to left).

There are many different factors which determine when the ambient temperature changes from one zone to the next. Environmental factors include humidity, wind, solar radiation, duration of heat, night time cooling, etc. Animal factors include the animal's body type, size, age, health/disease, fitness, body condition, etc.

A great deal of research has been completed on the effects of heat and management practices on domestic horses undergoing strenuous activity in humid conditions. There is limited research on horses at rest.

Shade Research

An animal's (or person's) perceived environmental temperature is a combination of five factors (inset to right). Shade blocks the solar radiation thus lowering the animal's perceived temperature.

Perceived Temperature Factors

1. Ambient temperature
2. Relative humidity
3. Wind speed
4. Precipitation
5. Solar radiation

In her research, Dr. Holcomb addressed two questions:

1. Do domestic horses benefit from shade?
2. If shade is available, will they use it?

The conclusions reached in the study were (1) horses do benefit from shade and (2) if shade is available, horses will use it; however, use of shade may depend on herd dynamics and the socialization between animals. Horses with compromised health are likely to receive greater benefit from shade than mature, healthy horses.

Following her presentation, Dr. Holcomb addressed questions from the Board.

Mr. Tim Harvey believes that when a horse becomes uncomfortable and shade is available, they'll use it. His experience has shown that anhydrosis in horses can be caused when an animal becomes over heated from exercising and has trouble self-regulating its temperature. In these cases, shade is an important factor allowing the animal to lower its body temperature. Mr. Harvey asked if wind is an important factor in the thermo-regulation process and asked how much of a factor it is. Dr. Holcomb indicated that wind certainly is a factor in the thermo-regulatory process but could not quantify how important of a factor.

Dr. Sue McDonnell asked where the animals were fed in relation to the shade in the third study with groups of horses. Dr. Holcomb indicated that the animals were fed before observations and were not fed in the shade. Dr. Holcomb indicated the socialization factor observed during the trial was unexpected and would be addressed differently in future studies.

Callie Hendrickson recalled that the animals used the shade 7.1% of the time in both studies. Dr. Holcomb indicated that the same percentage of time in the shade was a coincidence and shouldn't be compared as a completely different methodology was used in each study. In understanding the difference in the percentages between the two studies, it was explained that in Dr. Holcomb's second study, the animals' overall shade use was 57.1% of observations, with a preference of 7.1% above chance, but in the third study, the animals' overall shade use was 7.1% of observations. The second study was a "preference test" with feed and water provided equally in sun and shade, reducing the possibility that where they spent time was based on where the feed and water was rather than the shade. Since feed and water were not provided in both the sun and shade for horses in the third study, it wasn't a preference test and a percentage of use above

chance can't be calculated. Thus, the results of these two studies can't be compared directly. Dr. Spratling indicated that the study demonstrated that the animals didn't show an overwhelming preference for shade.

Dr. Sue McDonnell asked if the animal's rolling behavior had any impact on their shade preference. Dr. Holcomb indicated that rolling increases the amount of dirt on the animal which protects the animal by blocking some radiation. There was not a significant amount of rolling behavior demonstrated during the study; therefore, it could not be analyzed.

Mr. Harvey asked how often extremely hot conditions were observed during the study. Dr. Holcomb could not recall the number of days where extreme temperatures were recorded but indicated less than half of the days were over 100°F. Mr. Harvey indicated that it would be important to have similar studies conducted under conditions more reflective of those found in BLM facilities. Dr. Spratling indicated that he believes the temperatures experienced at the study location in Davis, California would probably be more severe than those at the Palomino Valley Corrals north of Reno, Nevada.

Adoption Initiatives

BLM Led Adoptions



Debbie Collins

Debbie Collins, a Wild Horse and Burro Specialist on the Washington Office's Wild Horse and Burro staff stationed at the Moore Field Office in Moore, Oklahoma, is responsible for national marketing and the national wild horse and burro call center.

Ms. Collins provided an overview of the BLM's adoption program between 2000 and 2014. Prior to 2005, BLM typically adopted between 6,000 and 7,000 animals per year, which was sufficient to balance the animals being removed from the rangeland. Since 2005, the number of animals being adopted steadily declined to a point of 2,500 animals in 2013. In 2014, 802 animals have been adopted to date, which is approximately the same number at the same time in 2013. With the scheduled 2014 events, BLM is hoping to reach or exceed 2,000 animals in 2014.

Earlier in the meeting there was discussion of impacts of the economic recession and increasing fuel and feed costs on the adoption program. In addition to the increasing costs of maintaining an adopted animal, the decline in the domestic horse market has also adversely impacted wild horse and burro adoptions. In the past, the \$125 adoption fee for an untrained wild horse was a bargain compared to paying a much higher price for a trained animal like a registered quarter horse. However, due to current economic conditions, we are competing with domestic registered quarter horses that can be purchased for approximately the same price as an untrained wild horse.

To address the continuing decline of the adoption program, the Washington Office has found that the satellite adoption approach must be modified to combat the higher costs (facility rental, travel and labor costs, etc.) BLM District and Field offices were asked to refocus their efforts on facility adoptions and making the public aware of the various adoption events. A major challenge is the location of most facilities which are in the western United States when the major adoption markets are in the eastern United States. With BLM's strong emphasis on Internet adoptions, the need for facilities in the midwestern or eastern United States is important. There is one facility each in Mississippi, Oklahoma, and Nebraska. These facilities are not close enough to many of the eastern markets where we have interest from adopters and TIP trainers. Transportation of animals to an adoption event is a major challenge for BLM. Anyone with suggestions on cost-effective ways to transport short loads of animals to internet adopters and TIP would be welcome. Currently, animals are transported using a straight deck semi-trailer or a government stock trailer. In addition to the adoptions listed on the 2014 schedule, the Eastern States offices have added adoptions in Florida and Missouri. BLM's Moore Oklahoma office is looking for locations to conduct five additional adoptions.

In May, the Ridgecrest, California facility will be the first BLM facility to provide wild horses for adoption at an Extreme Mustang Makeover event. In the past, only trained animals were taken to the event. In addition, on the Sunday after the Extreme Mustang Makeover event, TIP trainers who attend the event will have the opportunity to take another animal for training.

BLM continues to explore opportunities to counter the changing social impact of less youth growing up in an agricultural environment. BLM is working to increase its involvement with 4H, Future Farmers of America and other agriculturally based groups. Many states are working with organizations such as the U. S. Pony Club and the Mustang Heritage Foundation to encourage youth involvement.

Volunteers are making significant efforts in the adoption program. Twenty to thirty volunteers will be travelling to an adoption event in Archdale, North Carolina in a few weeks. Similarly, more than twenty volunteers attended the Hoosier Horse Fair in Indiana assisting BLM in promoting the adoption program. There are challenges continually facing the adoption program but with the enthusiasm being shown by the BLM field offices and the active involvement of volunteers and partner organization, the future will be bright.

Although BLM has a large number of animals in holding facilities, it must focus its adoption efforts on one animal at a time.

Following her presentation, Ms. Collins addressed questions from the Board.

Mr. Tim Harvey asked if the 174 animals adopted in New Mexico was a reflection of the Mustang Camp. Ms. Collins indicated that the higher number of animals adopted in New Mexico is a result of holding the majority of their 2014 adoptions between October and March. Due to funding, they chose to hold their adoptions in the first 6 months. In a follow up question, Mr. Harvey asked if Ms. Collins had seen the paper he wrote a couple of years ago about the “Milk Run”. Ms. Collins indicated that she was aware of the effort and had participated in a few calls on that subject. Mr. Harvey indicated that the time of year when events are held is critical. People are less inclined to attend an adoption event when the roads are icy and snowy. He encouraged BLM to place more effort in making animals available for adoption in the East. Ms. Collins indicated that BLM recently delivered some animals to Boston for a youth and yearling event. Ms. Collins also expanded on an effort to work with individuals in the Lorton, Virginia area to host an adoption event.

Mustang Heritage Foundation Partnership



Kali Sublett

Kali Sublett, Executive Director for the Mustang Heritage Foundation (MHF), provided an overview of MHF programs, events, and activities that actively promote and increase adoption of BLM’s wild horses. Ms. Sublett began her association with MHF as an event coordinator in 2007 and has served in several capacities including Director of Operations and currently Executive Director.

The MHF works under a BLM Assistance Agreement which provides funding and horses for adoption. MHF’s primary focus is promoting successful adoptions through training and gentling programs through horse trainers, mustang adopters, youth, veterans, and under-served groups. Their primary programs include the Extreme Mustang Makeover, Mustang Million, Trainer Incentive Program, Mustang Heritage Youth, and the Mustang Mentors for Veterans.⁷

⁷ Funded completely from non-BLM sources.

Extreme Mustang Makeover



The *Extreme Mustang Makeover* is the MHF's most popular program. Six events are scheduled in 2014 (inset). All events are free to the public on Thursday, Friday, and Saturday; however, tickets are sold for the Saturday evening performance. The 2014 Extreme Mustang Makeover adoption goal is 330 animals.

Extreme Mustang Makeover events have been held in sixteen States, with ten States being west of the Mississippi River, as it continues to be a challenge to get animals to the eastern United States. Similar to BLM, the MHF continues to explore avenues for transporting animals to the eastern United States where there is tremendous interest for adoptions.

Extreme Mustang Makeover 2014 Events

<u>Location</u>	<u>Expected Adoptions</u>	<u>Attendance</u>
Fort Worth, Texas (<i>Mustang Magic</i>).....	22	3,000 +
Norco, California	44	1,000 +
Nampa, Idaho.....	49	1,000 +
Decatur, Alabama	40	1,000 +
Shartlesville, Pennsylvania	50	1,000 +
Fort Worth, Texas	125	5,000 +

Trainer Incentive Program



The *Trainer Incentive Program* (TIP) is a non-competitive, “on your own” training program, which has been very successful with the adoption of almost 2,300 animals since its inception in 2007. Under this program, approved trainers take an animal home, gentle the animal, and then find an adopter.

The program initially focused on gentling 3- and 4-year old geldings from Nevada BLM HMAs. Since that time, TIP was expanded to include 5- and 6-year old mares and mustangs from HMAs in other BLM states. The TIP employs more than 300 trainers in 40 States.

In 2010, the *Store Front* program was added to the TIP program where trainers have the ability to take 12 or more animals, gentle the animals, and then find adopters for those animals.

MHF Youth Programs



Youth programs are held through the *Extreme Mustang Makeover* and the TIP programs. The *Youth and Yearling Mustang Challenge* events are held regionally and managed by approved trainers in the TIP program. Under this program, a youth will gentle and train a yearling animal to prepare for a competition in their region to win prizes and awards. Since 2010, over 420 youth (ages 8 to 17) have been involved in the program.

The *Mustang Million Youth and Yearling Edition* is part of the *Extreme Mustang Makeover* program, where youth have approximately 140 days to gentle and train their chosen, previously “untouched” mustang yearling. The goals of training include halter breaking, trailer loading, picking up feet, and leading the animal through a series of obstacles and maneuvers. At the end of the training period, youth compete in Fort Worth, Texas for a \$50,000 purse and prizes. Over 70 youth have competed in the program from 17 States.

Youth and Yearling 2014 Events

<u>Location</u>	<u>Expected Youth and Yearlings</u>
Tennessee.....	30
Oregon.....	30
Washington	15
Massachusetts.....	22
Utah	5



In 2010, the MHF received a grant from BLM's Environmental Education program to host three Mustang day-camp events called "Camp Wildfire." At each Camp Wildfire event, youth ages 8 to 18 learn about the American Mustang and its inhabitation of the West through fun and exciting activities. Due to the success of the program in 2010, the MHF has received funding to continue Camp Wildfire events every year since. The 2014 Camp Wildfire events will be held in five locations across Texas.

Mustang Million 2013



The *Mustang Million 2013* event resulted in the adoption of 562 mustangs in April and May, 2014. Unlike the *Extreme Mustang Makeover* program where the animals are randomly assigned to a trainer and the animal is adopted after the event, in the *Mustang Million* program, the trainer or adopter is able to select and adopt their animal prior to the event.

After an incredible week of competition, the top 20 Legends finalists completed before a crowd of 6,000 spectators for \$200,000 and a 2014 Ram truck. Each competitor prepared a 3.5 minute freestyle performance complete with music and choreography. The *Mustang Million* event created a tremendous awareness of the MHF and its program. The *Mustang Million* competition and five mustang trainers were featured in a reality television series in Nat Geo Wild that aired in December 2013. Facebook, the Internet, and other local media sources also provided the MHF a link to the public.

Ms. Sublett provided some interesting figures associated with BLM's adoption program and the MHF.

Average lifetime cost of an un-adopted mustang in a BLM facility: \$46,252

Average cost to BLM for one MHF adoption: \$2,100

Number of MHF adoptions from 2007 to 2013: 4,862

Average lifetime cost of holding 4,862 un-adopted mustangs in a BLM facility: \$224,877,224

Average one-time cost to BLM for MHF adoption of 4,862 mustangs at \$2,100 per animal: \$10,210,200

Average savings to BLM for 4,862 adoptions since 2007: \$214,667,024

Average savings to BLM per horse adopted at \$2,100: \$44,152

In 2014, the MHF received \$1,250,000 which will fund an estimated 600 adoptions and six *Extreme Mustang Makeover* events and the *Trainer Incentive Program*. In looking toward 2015, the MHF believes they could adopt over 1,500 animals and host at least ten *Extreme Mustang Makeover* events at an estimated cost to BLM of \$3,150,000. Currently, BLM provides approximately 70 percent of MHF's annual budget.

In closing, Ms. Sublett indicated that BLM must continue providing funding to groups/programs that can successfully facilitate adoptions.

After her presentation, Ms. Sublett addressed questions from the Board.

Dr. Spratling asked how many animals were adopted by the MHF in 2013. Ms. Sublett indicated that 863 animals were adopted in 2013. The average over the past several years has been approximately 700 animals. In response to an earlier question from Mr. Tim Harvey, Ms. Sublett indicated that in New Mexico since October 1st, there have been 53 animals adopted primarily through the Hutchinson prison program and TIP.

Callie Hendrickson asked what percentage BLM is paying toward the MHF's 2014 budget of \$1.25 million and who the other contributors were. Ms. Sublett indicated that BLM is providing 72 percent of the \$1.25 million. The remaining 28 percent is corporate sponsorships, program income through ticket and promotion sales, and private contributions. In a follow up question, Ms. Hendrickson asked if the long-term plan was to reduce the percentage provided by BLM. Ms. Sublett indicated that the intent is to reduce BLM's percentage by increasing the corporate sponsorship contributions and program income.

Ms. Hendrickson inquired as to the type of educational information the MHF provides the public to help them understand the resources required to maintain a sustainable population of animals on the rangeland. Ms. Sublett indicated that the MHF provides links to BLM information concerning management on the rangelands; however, the MHF's primary focus is on finding horse trainers and getting animals gentled and out to the public. Ms. Hendrickson asked that the MHF consider expanding their efforts to include distribution of information and education of the resources required to maintain a wild horse population on the rangeland.

Dr. Spratling offered a contrary thought that with the MHF's primary focus being on the transfer of animals to private ownership, assuming an additional role as was suggested would be difficult. Ms. Hendrickson indicated that distribution of information and education doesn't need to be a primary role but ensuring the information and education is available would be helpful.

Dr. Spratling asked Debbie Collins if the identified \$7.45 million identified for adoptions includes the \$1.2 million provided to the MHF. The response was that the \$1.2 million was included in the \$7.45 million figure.

Tim Harvey asked if there was an actual dollar assignment of a horse adopted by the MHF versus an animal adopted by the BLM. Dean Bolstad indicated that BLM has completed some analysis of that comparison which found the adoption costs are relatively similar. Mr. Harvey indicated that he was supportive of allowing private enterprise to find more efficient and effective avenues for getting something accomplished. Greg Shoop added that there is a leveraging factor with the MHF brand.

Mr. Harvey indicated that he believes there is great value in the TIP program and for an animal assessment program prior to animals being available for adoption. Mr. Harvey ask if there was a possibility of a joint effort between the BLM and MHF TIP program to include prisoners involved in the horse training program while in prison and utilize their talents and skills after they've been released from prison. A TIP trainer could make an assessment of an animal's suitability for gentling and adoption which could then be gentled by a released prisoner at a BLM or other facility. Debbie Collins responded that programs like the MHF, the Platero Project, and the prison inmate program are addressing the issue of providing gentled animals which are more marketable for adoptions. One obstacle to increasing these types of efforts is infrastructure which requires funding.

Greg Shoop thanked Ms. Sublett for the work that has been accomplished by the Foundation.

Platero Project Partnership



Heidi Hopkins

Heidi Hopkins, Wildlife Biologist for The Humane Society of the United States (HSUS), provided an overview of the Platero Project, which is 100 percent privately funded. Funding for the Platero project came from an anonymous donor who as a child read a book titled *Platero Y Yo* about a man and his faithful burro named Platero.

The HSUS has a Memorandum of Understanding with the BLM to assist with adoption of wild burros. A \$760,000 grant was received in 2013 which must be spent within a period of five



years. Approximately 50 percent of the funding is to be spent on education and adoption with the remaining 50 percent to be spent on fertility control research.

Activities being addressed with the education and adoption funding are:

- Platero Project's burro training program, which is very similar to the MHF's TIP program;
- Enhance the sale program;
- Connect adopters to trainers, adoption events, facility locations, and pick up points;
- Support a transportation network; and,
- Marketing and promotion.

Fertility control research funding will address the use of PZP on wild burro herds. HSUS will be submitting an application for additional funding support to the BLM on May 7th to address remaining funding needs. Currently, there is one published study on the use of PZP on burros, which was very successful. The study was performed on a herd of wild burros in the Virgin Islands.

In the first year of the grant (2013), there were not any burros adopted through the training program and 26 animals were sold. In 2014, 88 burros entered the program of which 51 have been adopted, which represents 60 percent of the burros adopted by BLM in 2014 to date. There have been 57 burros sold in 2014.

The HSUS has been working with several different organizations including the Pacific Northwest Horse Club in Oregon, the Wild Horse Rescue Center in Florida, Ever After Mustang Rescue in Maine, Great Escape Mustang Sanctuary in Colorado, Appalachian Center for Wild Horses in North Carolina, and the Mustang and Wild Horse Rescue of Georgia. Trainers and adopters have been found in 14 states including Alaska.

HSUS will be hosting *The Great Burro Turnaround* event with BLM and the Pacific Northwest Wild Horse Club in McMinnville, Oregon on July 13, 2014.

In closing, Ms. Hopkins was hopeful the Advisory Board will be supportive of the Platero Project, which has limited funding for five years. HSUS is seeking additional funding from other sources. HSUS would encourage the Board to develop a recommendation for a wild burro fertility control research project. Ms. Hopkins indicated that it is unfortunate the grant funding cannot be used to address the NAS recommendation for additional wild burro genetic diversity efforts.



Following her presentation, Ms. Hopkins addressed questions from the Board.

Dr. Spratling asked if the HSUS had an ongoing project associated with burro fertility control. Ms. Hopkins indicated that HSUS is in the planning stages for a research project. Dr. Spratling asked a follow up question if the private funding would be used to fund their burro fertility control research. Ms. Hopkins indicated that with the limited burro fertility control research that has been conducted, the HSUS study would begin a more management level approach to start using PZP instead of being more research oriented. The amount requested in the original grant was not sufficient to address a more comprehensive study, which would be BLM's preference. Dr. Spratling asked Ms. Hopkins for an estimate of the amount needed to complete a more comprehensive study. Ms. Hopkins was reluctant to identify an amount and suggested Dr. Spratling talk with her after the meeting. Dean Bolstad commented that BLM asked HSUS to submit a research proposal through the Request for Application process. Ms. Hopkins indicated that HSUS is also seeking other private funding.

Dr. Cope asked how the decreasing lack of diversity was determined to which Ms. Hopkins was unable to provide a response as the finding referenced was from the NAS report. Mr. Bolstad clarified a statement made the previous day.

He was referencing the lack of genetic diversity issues within wild horse herds. The NAS report indicated that BLM should be concerned with wild burro diversity and should be testing the wild burro herds more frequently.

Tim Harvey asked if HSUS had access to a National Park Service study done on burros in Saint John. Ms. Hopkins indicated that the study was completed by John Turner and she had assisted him on some other projects and research. She knows the area and how the study was completed.

Inmate Training Program

Martha Gagne, Special Assistant to BLM's Wild Horse and Burro Division, explained that the inmate training program is a partnership between BLM and State Correctional facilities. Currently, BLM has six partnerships (inset) that train and prepare wild horses and burros for adoption or sale to private owners with the assistance of prison inmates and professional trainers. The inmate training program is a "win/win" for the inmate, the animal, and society at large.

Prison Inmate Training

Locations

Wyoming
Arizona
Colorado
Kansas
Nevada
Utah

On average, approximately 50 animals are trained and placed from each facility annually. If the program could be established in half the States, an additional 1,500 animals would find good homes each year while providing a valuable rehabilitation tool for the correctional system. To understand the best elements of a successful inmate training initiative model, BLM interviewed current partners including wardens, farm managers, and BLM State Wild Horse and Burro Program leaders to identify best practices that achieved results for both parties. Best practices included job training, rehabilitation, and community events.

In 2013, BLM made a presentation to the American Society of Correctional Administrators asking that any state interested in developing a prison inmate training program contact BLM. BLM will be hosting correctional leadership from six new states and the Federal Bureau of Prisons in Carson City, Nevada next week where they will learn how to recreate the program model within their respective states.



Alan Shepherd

Alan Shepherd, BLM Nevada's State Wild Horse and Burro Program Leader, explained that the northern Nevada Correctional Facility training program provides a very positive atmosphere and is extremely beneficial to the inmates involved. While the number of animals adopted from the program is relatively low (up to 100 animals per year), the primary benefit is the educational background and experience gained by the inmate. The efforts and leadership of Tim Bryant (ranch manager) and Hank Curry (trainer) has dramatically improved the BLM Nevada program as well as that of the National office.



Tim Bryant

Tim Bryant indicated that a successful program begins with the support received from the local BLM offices and staff as well as community involvement. After each adoption, Alan Shepherd, Hank Curry, and Mr. Bryant evaluate the adoption to determine how the program can be improved. It is important not to become complacent and continually look for ways to improve the program.

The Nevada program began in 2000 under the Nevada Department of Agriculture who had an issue with estray horses in the Reno – Storey County area. In 2002, the program transferred from the Department of Agriculture to the Nevada Department of Corrections, which entered into an agreement with BLM later that year. At the beginning of the program, the goal was to train and adopt an animal every 60 days, which was found to be unrealistic and eventually went to 120 days.



Benefits of the program to the inmate include instilling structure and confidence, teaching an industry skill, making the inmate more prepared for re-entry into society, and lowering the recidivism rate where 15 percent of the inmates involved in the program reoffended as compared to 28 percent of inmates not involved in the program.

Since the beginning of the program, over 200 inmates have trained 852 animals for adoption. Of the 852 animals, 679 have been adopted by the public and 83 have been adopted by various State and Federal agencies. Much of the program's success can be attributed to the public for donating tack, saddles, helmets, and other items of importance to keep the program operating safely.

After the presentation, Mr. Bryant and Mr. Shepherd addressed questions from the Board.

Mr. John Falen indicated that through his visits to the Carson City facility and involvement with the Mustang Heritage Foundation, he has had opportunity to talk with many trainers who, without exception, indicated that mustangs are different than most domestic animals. When the mustang decides that a person will not hurt them, they become your friend and will follow you around like a pet. While the various gentling programs discussed today will not by themselves solve the wild horse and burro issue, the awareness of mustangs created through those programs make the animals easier to adopt. These programs help the viability of BLM's adoption program.

Greg Shoop recommended the speakers and the audience view the *Wild Horse Redemption* documentary that addresses the Colorado prison training program.

Tim Harvey asked if the prison program had ever not adopted one of their animals. Alan Shepherd indicated that the program's adoption success rate is approximately 99.9 percent. Mr. Harvey indicated that one of the benefits of the program to the inmate is the development of patience which in turn creates empathy.

Dean Bolstad reiterated a statement made by Ms. Gagne in her opening statement for this presentation which addressed the effort to develop the "inmate training initiative." BLM is working to expand the initiative by creating more "store fronts" in the eastern part of the United States. He also indicated that the success of the program has been due to the efforts of the various trainers and program coordinators.

Dr. Spratling thanked Tim, Alan, and Hank Curry for their dedication and commitment to the program.

Advisory Board Recommendations to the BLM

After considerable discussion addressing feedback from each Advisory Board-formed working group, the Board prepared the following recommendations to the BLM.

BLM-Formed Working Groups

The following recommendations were made by the Board concerning the BLM-formed working groups.

Recommendation #1: The National Wild Horse and Burro Advisory Board recommends Dr. Sue McDonnell replace Dr. Robert Bray on the BLM-formed *Comprehensive Animal Welfare Program*.ⁱ Other members of the working group currently include Dr. Boyd Spratling and Tim Harvey. BLM's Point-of-Contact is Dean Bolstad.

Recommendation #2: The National Wild Horse and Burro Advisory Board recommends Fred Woehl replace Julie Gleason and recommends the addition of John Falen to the BLM-formed *Increasing Adoptions* working group.ⁱⁱ The other member of the working group is June Sewing. BLM's Point-of-Contact is Sally Spencer.

Recommendation #3: The National Wild Horse and Burro Advisory Board recommends Fred Woehl be added to the BLM-formed *Eco-Sanctuary* working group.ⁱⁱⁱ Other members of the working group include Tim Harvey and Callie Hendrickson. BLM's Point-of-Contact is Zach Reichold.

Advisory-Formed Working Groups

The following recommendations were made by the Board concerning the Advisory Board-formed working groups.

Recommendation #4: The National Wild Horse and Burro Advisory Board recommends Rick Danvir replace Julie Gleason on the Advisory Board-formed *Ecotourism* working group.^{iv 8} The other members of the working group include Callie Hendrickson (Chair) and Tim Harvey. The BLM Point-of-Contact is Debbie Collins.

Recommendation #5: The National Wild Horse and Burro Advisory Board recommends the Advisory Board-formed *Establish Criteria for Evaluation of the HA/HMA Suitability of Herd Reintroduction* working group^v be combined with the Advisory Board-formed *Herd Area Repopulation* working group.^{vi}

Recommendation #6: The National Wild Horse and Burro Advisory Board recommends Dr. Sue McDonnell replace Dr. Robert Bray on the Advisory Board-formed *Herd Area Repopulation* working group. Other members of the working group include Tim Harvey and June Sewing. The BLM Point-of-Contact is Dean Bolstad.

Recommendation #7: The National Wild Horse and Burro Advisory Board recommends Fred Woehl replace Paul Durbin and recommends the addition of Rick Danvir to the Advisory Board-formed *Financial* working group.^{vii} The other member of the working group is Callie Hendrickson. The BLM Point-of-Contact is Holle' Hooks.

Recommendation #8: The National Wild Horse and Burro Advisory Board recommends Fred Woehl replace Julie Gleason on the Advisory Board-formed *Public Comment* working group.^{viii} Other members of the working group include Tim Harvey and June Sewing. The BLM Point-of-Contact is Debbie Collins.

Recommendation #9: The National Wild Horse and Burro Advisory Board recommends Tim Harvey and Dr. Robert Cope replace Paul Durbin and Julie Gleason on the Advisory Board-formed *Director's Challenge-type Efforts that Support Volunteer Resources* working group.^{ix} The other member of the working group is June Sewing. The BLM Point-of-Contact is Debbie Collins.

Recommendation #10: The National Wild Horse and Burro Advisory Board recommends the title of the Advisory Board-formed *Director's Challenge-type Efforts that Support Volunteer Resources* be shortened to *Support Volunteer Resources*.

Recommendation #11: The National Wild Horse and Burro Advisory Board recommends Dr. Sue McDonnell and Dr. Robert Cope replace Dr. Robert Bray and Jim Stephenson and that Tim Harvey be removed from the Advisory Board-formed *Population Growth Suppression* working group.^x The other member of the working group is Dr. Boyd Spratling. The BLM Point-of-Contact is Dean Bolstad.

Recommendation #12: The National Wild Horse and Burro Advisory Board recommends the Advisory Board-formed *National Wild Horse and Burro Advisory Board Standard Operating Procedures* working group be disbanded.^{xi}

Recommendation #13: The National Wild Horse and Burro Advisory Board recommends Dr. Robert Cope replace Jim Stephenson on the Advisory Board-formed *Resources* working group. Other members of the working group include Dr. Boyd Spratling, John Falen, Rick Danvir, and Callie Hendrickson. The BLM Point-of-Contact has yet to be determined.

ACTION: BLM will (1) identify their Point-of-Contact for the Advisory Board-formed *Resources* working group and (2) provide a list of BLM Point-of-Contacts for each Advisory Board-formed working group (including the contact's e-mail and telephone number) as part of the BLM's 30-day response to the Advisory Board recommendations.

Dr. Spratling asked Dean Bolstad to address a question raised by some Board members after yesterday's public comment period concerning the events surrounding the recent removal of unclaimed horses from public lands near Greybull,

⁸ Dr. Spratling clarified the Board's recommendation to indicate the membership of the Advisory Board-formed Ecotourism working group should be the same as the BLM-formed Eco-Sanctuary working group.

Wyoming as raised during yesterday's public comment period. Mr. Bolstad explained the animals originally came from private lands and that the animals relocated to public lands in the 1980s. The public lands on which the animals relocated are not an identified wild horse HA or HMA. The animals were considered unclaimed animals in trespass on public lands. Under BLM's unauthorized grazing use and trespass regulations, the animals were gathered and, in accordance with Wyoming estray laws, they were turned over to the Wyoming State Livestock Board who subsequently sold the animals. In a conversation with the commenter, it was asked that BLM be more transparent when similar situations occur in the future and if animals are to be sold at public auction that the public be made aware of that sale. Mr. Bolstad emphasized and clearly indicated that BLM did not sell the animals in this specific instance.

Prior to addressing additional recommendations, Callie Hendrickson presented a short Power Point presentation highlighting pictures of rangeland conditions which demonstrate why the Advisory Board has concern with the apparent lack of timely action to address the wild horse and burro population growth and its impact to the rangeland resource.

Recommendation 14: The National Wild Horse and Burro Advisory Board recommends BLM conduct environmental analyses which highlight the consequences and the resulting cumulative impacts of leaving horse numbers over AML on the affected rangelands. Also, the NEPA analyses should emphasize the impact on rangeland health of keeping numbers above AML levels.

Recommendation 15: The National Wild Horse and Burro Advisory Board recommends BLM consider establishing a simplified format/process available on the website to allow BLM to give quick response to offers of volunteerism, service, and resources. Characteristics – quick reply that includes how you can be contacted concerning your offer.

Recommendation 16: The National Wild Horse and Burro Advisory Board recommends BLM continue its financial support for partnership agreements that aid the adoption of trained horses and burros and decrease the burden of long-term holding.

Recommendation 17: The National Wild Horse and Burro Advisory Board recommends that BLM explore options to increase continuity of Board membership.

Recommendation 18: The National Wild Horse and Burro Advisory Board recommends the BLM ensure budget is a standing agenda item for Board meetings.

Request from the Board: The Advisory Board suggests BLM provide information in a more timely manner particularly on research reports to allow for a comprehensive review prior to the meeting. Dean Bolstad made a commitment to provide information in a more timely manner to allow for review.

Next Advisory Board Meeting

The next Advisory Board meeting was tentatively scheduled for August 2014 in Cheyenne, Wyoming.

Closing Remarks

Due to the limited time remaining, closing remarks were limited to Dr. Spratling thanking everyone at the meeting and watching online for their participation.

Meeting Adjournment

The meeting was formally adjourned at 4:51 PM.

Acronyms

The following acronyms were used during the meeting and listed in alphabetical order.

<u>Acronym</u>	<u>Meaning</u>
AML.....	Appropriate Management Level
APHIS	Department of Agriculture – Animal and Plant Health Inspection Service
BLM.....	Bureau of Land Management
CAWP	Comprehensive Animal Welfare Program
EIS	Environmental Impact Statement
FACA.....	Federal Advisory Committee Act
FY	Fiscal Year
GIS	Geographic Information System
HA.....	Herd Area
HMA	Herd Management Area
HSUS	Humane Society of the United States
IM.....	Instruction Memorandum
IUD	Inter-Uterine Device
MHF.....	Mustang Heritage Foundation
NAS.....	National Academy of Sciences
NEPA	National Environmental Policy Act
PVC.....	Palomino Valley Corrals
PZP.....	Porcine Zona Pellucida
RFA.....	Request for Applications
RFI	Request for Information
SOP	Standard Operating Procedure
TIP	Trainer Incentive Program
TNZ.....	Thermal Neutral Zone
USFS	USDA, United State Forest Service
USGS	U. S. Geological Survey

ⁱ The *Comprehensive Animal Welfare Program* working group was originally formed by BLM at the Advisory Board's April 23 – 24, 2012, meeting in Reno, Nevada. At that time, the working group's membership consisted of Dr. Boyd Spratling, Tim Harvey, and Dr. Robert Bray. The BLM Point-of-Contact was Dean Bolstad.

ⁱⁱ The *Increasing Adoptions* working group was originally formed by BLM at the Advisory Board's April 23 – 24, 2012, meeting in Reno, Nevada. At that time, the working group's membership consisted of Julie Gleason and June Sewing. The BLM Point-of-Contact was Sally Spencer.

ⁱⁱⁱ The *Eco-Sanctuary* working group was originally formed by BLM at the Advisory Board's April 23 – 24, 2012, meeting in Reno, Nevada. At that time, the working group's membership consisted of Tim Harvey and Callie Hendrickson.

^{iv} The Advisory Board-formed *Ecotourism* working group was originally formed by BLM at the Advisory Board's April 23 – 24, 2012, meeting in Reno, Nevada. At that time, the working group's membership consisted of Callie Hendrickson (Chair), Tim Harvey, and Julie Gleason. BLM's Point-of-Contact is currently Debbie Collins.

^v The Advisory Board-formed *Establish Criteria for Evaluation of the HA/HMAs Suitability of Herd Reintroduction* working group was originally formed at the Advisory Board's March 4 – 5, 2013, meeting in Oklahoma City, Oklahoma. At that time, no Board members were appointed to the working group.

^{vi} The Advisory-formed *Herd Area Repopulation* working group was originally formed at the Advisory Board's April 23 – 24, 2012, meeting in Reno, Nevada. At that time, the working group's membership consisted of Tim Harvey, June Sewing, and Paul Durbin. At the Advisory Board's September 9 – 11, 2013, meeting, Dr. Robert Bray replaced Paul Durbin.

^{vii} The Advisory-formed *Financial* working group was originally formed at the Advisory Board's October 29 – 30, 2012, meeting in Salt Lake City, Utah. At that time, the working group's membership consisted of Callie Hendrickson and Paul Durbin.

^{viii} The Advisory-formed *Public Comment* working group was originally formed at the Advisory Board's October 29 – 30, 2012, meeting in Salt Lake City, Utah. At that time, the working group's membership consisted of Paul Durbin, June Sewing, and Tim Harvey. At the Advisory Board's March 4 – 5, 2013, meeting in Oklahoma City, Oklahoma, Julie Gleason replaced Paul Durbin.

^{ix} The Advisory-formed *Director's Challenge-type Efforts that Support Volunteer Resources* working group was originally formed at the Advisory Board's October 29 – 30, 2012, meeting in Salt Lake City, Utah. At that time, the working group's membership consisted of Paul Durbin, Julie Gleason, and June Sewing.

^x The Advisory-formed *Population Growth Suppression* working group was originally formed at the Advisory Board's April 23 – 24, 2012, meeting in Reno, Nevada. At that time, the working group's membership consisted of Dr. Boyd Spratling, Dr. Robert Bray, Tim Harvey, and Jim Stephenson.

^{xi} The Advisory Board-formed Complete - *National Wild Horse and Burro Advisory Board Standard Operating Procedures* working group was originally formed at the Advisory Board's April 23 – 24, 2012, meeting in Reno, Nevada. At that time, the working group's membership consisted of Dr. Boyd Spratling and Julie Gleason.